

SEQUENCE LISTING

<110> Moyer, Richard W.

Li, Yi

<120> Materials and Methods for Delivery and Expression of Heterologous DNA in Vertebrate Cells

<130> UF-221C1XCZ1

<150> 09/086,651

<151> 1998-05-29

<150> 09/662,254

<151> 2000-09-14

<150> 60/224,479

<151> 2000-08-10

<160> 80

<170> PatentIn version 3.1

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<210> 2

<211> 456

<212> DNA

<213> Amsacta moorei entomopoxvirus

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<400> 3

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| ttatatcttc aaaatatagc atattttaa atttcttcta tgtatgtatt atatttaata | 180 |
| aataaaaaata ataatatata tataagacaa tataaatttt tatatgaagg attgccagaa | 240 |
| ttcgaatcac aatgcaaaaa atgtaatgtt tcttttcatt tattatctta taataataac | 300 |
| ataatatcaa attttataaa taaatatata ataggacatg ttataataga acaaagccg | 360 |
| cttttattcc acaaaaaata ttatttagat ccattaaaaa aattaaatgt caatgtatat | 420 |
| attgtagatt ctcataatat tataaccagta tgggtaactt cagataaaca ggaatataac | 480 |
| gcaagaacaa taaggattaa aataaataaa ttaaaagatc aatatttaac cgaatttcct | 540 |
| aaagttaaaa ttagtaatat acaacctatt tttgtagaaa ataattttga tataattccc | 600 |
| aattatgata aaaaattaat aaatatattt gaaatagtgg gagggatatac taatggaatt | 660 |
| aatagaatga ataatttttt taaaaataaa ataaacacat acaaagataa aaaaaataat | 720 |
| ccaaattatg aaaataccag tattttatca ccatggctac attgtggtat gatttcagct | 780 |
| caaagatgtg ttttgaagc aaataaactt aaaaaatta aagattataa tatagaatca | 840 |
| atagattcgt ttatagagga aatttttata agaaaagaat tatctgataa tttttgttat | 900 |
| tataataata attataaatc ttttgcattc tgtccaaatt gggcaatatt aactttagaa | 960 |
| atacataaaa ctgataaaaag aaataaaaata tttagtttac gagaattaga gtatggcaaa | 1020 |
| acagataata aactttggaa ttattgtcaa tattatttat taaaatttgg ttatcttaac | 1080 |
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| gccatcgata aaacaattta tcttaatgat aaatatattt tcgatggata tgatcctatg | 1200 |
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| ccataaattt tataactcct gaatcatttg ctagtaatgg attttattat ataggtgaga | 120 |
| atgatacagt taaatgtgtg tattgtggag taaaaataaa taaatgggtt gaaggcgata | 180 |
| aaccagaaat tgatcataaa aaattttctc caaattgtag ttttttaaaa tctaattgatg | 240 |
| gaatagatga gtgtggcaat aataaaaaata tatctaacat tacacaaaaa ggagcagttc | 300 |
| atcctaattct atcaaatatt gttgaaagac ttaaaacata taaagagtgg cctattttcaa | 360 |
| tgcctatttc tacagaaaaa ctagcagaag ctggattctt ttatactgga aaaagtgata | 420 |
| aagttaaattg cttttattgt gatgggtggtt taaataaatg ggaaacagac gatgatcctt | 480 |
| ggatacaaca cgcaagatgg tttgataaat gtgattatgt taaacttgta aaaggcaaag | 540 |
| attttattca aaaagtaatg acacaatcca cgtttatcaa atcgtcgaaa aaagaaaata | 600 |
| tacctgaaat aaatatatca aacgatgaaa aaaatgatat aaaattatgt aaaatttggt | 660 |
| atatcgaaga acgagttatt tgttttgtgc cttgtgggtca tatattttgt tgtggaaaat | 720 |
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<211> 885

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<213> Amsacta moorei entomopoxvirus

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<210> 6

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aataatacta atggtatagt taacatatta tatattggat cttcaaaagc atatcatttt 240
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| gatgagatag aatctgaaaa ttattacgaa aaaatgaatt actataataa ttgttctgga | 720 |
| tataacgata tatataataa tatttcaggt tatatattaa ataaatcaaa tttatatgac | 780 |
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<210> 7

<211> 3318

<212> DNA

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| tataattgggt atataataaa accatcatcg ttagaacaat ttatagtatg taaatgcaaa | 240 |
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| gaagttaata tacaatatta ttataattat actgaagata gtaaaataac attaaataat | 480 |
| aatgatttag ttttatttat gactccttat aaaatagaga aaatatatag caaatataat | 540 |
| atattcatta atcaatatag gtggttttat gtattaaata atatagaacc atctggatca | 600 |
| tatagaataa atatggataa tatgcaaaaa attaaaacat ataataaaaa taaaacatca | 660 |
| tattattgca aaaatcctaa attgttattt tctaattatg ttaaaataga taaacatatt | 720 |
| cctgcaagtc gcgtttctat tgatatagaa tgccaacatt ttgggtgaatt tccaacagct | 780 |
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| ataaagaaaa taataacatt aataaactat gaaataataa aaaattatgt gggagaaaag | 900 |
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| | |
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| aggaaaaataa ataagttaaa aggtttatgt ttagataatg tatattctac aaatgagata | 1140 |
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<212> DNA

<213> Amsacta moorei entomopoxvirus

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<212> DNA

<213> Amsacta moorei entomopoxvirus

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| atagccatta acattatttc aaacataata gcaaaaataa atataccaaa tatagaaaaa | 2520 |
| gacataataa caactatatt ttatccaatg tatcaaaaata aaactagtat tttactaat | 2580 |
| ttattttatt caattatatt acaattatat tgtattaatt ataataaatt aattaaaaaa | 2640 |
| gataatataa acaaaacaag aaaacaacac attataaatg gatgtaatcc tgaattacat | 2700 |
| tggataacaa cattattatt taatatgata ttattttcta tatcagtaat accaataata | 2760 |
| ttatatatgt taaatattaa atcatttttt gatttaatta tattatattt tatattgata | 2820 |
| attaatgcat tatcatttat gcttttttcg attataatat taatgtttga taatcaatcc | 2880 |
| gataaaataa tattaatttt agtatttata ttaggcatac tattacctat atataaaatt | 2940 |
| aaatataaaa atattatttt agatatatta tcatatatat ttatacctag ttgtatatca | 3000 |
| atgtctataa ttgaatattt aaatacacac aaactaaatt atataatttc gattataata | 3060 |
| caaattttat tatatttaatt ttttaattata ttaatagaaa gaggtttaat tgatataata | 3120 |
| tataataaga taattaattt aaaatataat agaaaaata ataattattt tgaattacaa | 3180 |
| aataaaaca aatatactga ctataattca tcattaatta tgtcaaatgt ttataaaata | 3240 |
| tataataata aattggcatt aaataatata aattttaaaa tatcagaagg aaaatgtttt | 3300 |
| ggaattattg gtggtaacgg atgtggaaaa agtactattt ttaaaatatt atctggcgaa | 3360 |
| gaatgtgtta caaaaggaaa tatttatata ggatgttcta acagatcatg gatattaaaa | 3420 |
| tcaaattatt ttaaaaaaat atcttattgt tctcaatttt ttggcataga tacattttta | 3480 |
| acaggaagac aaaattttaa attaattatg atattaaatg gttttagtga taaacatata | 3540 |
| caatattata ttaatttttg gttaaaatta ttaaatatag aaaaatatgc agataaagca | 3600 |

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gtttatacat acagtactgg tattataaaa cgtttaaaaa tagcaatgtc attagcacct 3660
agatcaatth taactttaat ggatgaacca acgtcaggaa tagatattgt atccaaacaa 3720
attatatgga aaactataaa atatattatt aattataatt attataatta ttacaaacat 3780
tccattttta tttcatcaaa taatatagaa gaaatagaat atttgtgctc taatgtgatt 3840
atcctagatt ctggaaatat aatgtataac gatactttgg aaaatattaa aaatatacat 3900
agtactaaaa taattaatat taaattatta cattatgata ataacaaaat ttgtaaaata 3960
aaaaataaat taaaaaataa aggtttttatg ttaaaatcag ataataaatt taaattaaca 4020
ttttgtgtat ctaaaaatat taatttgaaa tatagtgaat tatttaaaat attatatata 4080
ttaaagaata attattcaga tataattgat caatatgata taagtgatac aaatatagaa 4140
caattattht ca 4152

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<210> 10

<211> 236

<212> DNA

<213> Amsacta moorei entomopoxvirus

<400> 10

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atgaattatt acattttatt atgtctatth atgttattht catctagtta taattttaaa 60
ttaataaata ataatatthg taatgaagat tatgatcctg gaatatgtag aataggaata 120
ttagatggta ttataattat aatattaaag attgtaaaat atthatttat ggtggatgtg 180
gtggtaacat gaataattht aataattatg aagattgtat taataaatgt ttaatt 236

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<210> 11

<211> 1719

<212> DNA

<213> Amsacta moorei entomopoxvirus

<400> 11

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atgaatatat atthtaaaaa tgcattccaa gatacaatat cgcattctgtc aaaatttaca 60
aatcaaataa atgatattat atcatttgat attaataatt ttactaaaaa tgthtttgatt 120

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| | |
|---|------|
| atgcgtaata atattaataa tattagaact aatthttgaaa atgtgtctga tgataatagt | 180 |
| ataaaaagaa gaataacaga atthttttgat aaacaaaata cgccaaattht aaaattagga | 240 |
| agtataatat caattattaa atthtcaacat ttaactgtaa catatgttaa taaaataata | 300 |
| aaagaaattg taacatataa atgtaatact agagaaataa atatagtaaa tthtttcatct | 360 |
| gtcacatctc aaatthtcaaa ctacgataat cctatattaa atgaaatatt aaaacaatat | 420 |
| gtatataaac aaaaattaaa aaatgttact gttataaatg ataaaaagaa aataattgat | 480 |
| cctgatgatg agaaattagc tgaatctatt aaaaaaatat tagaagaaat attaaaaata | 540 |
| ttattaatta taaaaaacia tgattgtgtt gcttatgggt catttacttg ttataatata | 600 |
| aatagaagta taaaatataa tgatatagat ttatatagta ctgatgcata tagaatttht | 660 |
| atattthttta tgatatatat acattthtact attggacatg acacttgtht atttagtata | 720 |
| cctthttataa ctgggcacat atcgthtaaaa tataaaaaata tathttataat agattgtata | 780 |
| thtttagata attctattat aaatgttatt aataaatctt taattataa tatatathtt | 840 |
| atagatcccg gthttacaaat gttataaat thttagaatgt tatcagaaaa thtttagatct | 900 |
| tataaaatat atgaaaaaat ggaagaatct thaaataaat ataaaacatt attaaattat | 960 |
| thttgttaata ataataataa atttaataaa caaagattaa attattgggt aaaatcagat | 1020 |
| gthttgtagaa ataathttcc atatactata gtcgacaata caatattaat atcaataaaa | 1080 |
| gaattgatag atataagtcc atatgattat ataatgattg tattagattc gccgtcagac | 1140 |
| ataatggaaa aattatctaa tattagtggg ctatttagta gaaaatatgg tgctthtttht | 1200 |
| aatgaaatat thtttgaaac aaaaaaaaata aaaaataaaa taaatacata tgctggaaac | 1260 |
| acaaataaca taacacaatt aattgatgaa aataaattaa taaaattaaa tagaagtgat | 1320 |
| ataaatatgc catataatat taatcccaat aagaaatatt taathtttcag taatttaaca | 1380 |
| acatctacgt atgthttactt tgagaatgat aaaatgactg atatatcagt aaaaaatcta | 1440 |
| atatcattta tatcaacagc ttgtttatat aatttgttac acaaaaaaga tgattthtgg | 1500 |
| atggaattat attatttaac attacactgt cttacattta ccgaaactag aaaattaaat | 1560 |
| gaatataaag taatagatag atataaaaata aaaggcgaac ataaagaaat atcattgtgt | 1620 |
| aaaaatttat ttaattcaat atataaaaat aaaagtatgg aggacgaata tatggattat | 1680 |
| aatacattta tagatttaac taatataaat ggaggatat | 1719 |

<210> 12

<211> 286

<212> PRT

<213> Amsacta moorei entomopoxvirus

<400> 12

Met Thr Ile Phe Glu Ile Leu Ile Trp Ile Ile Val Leu Leu Ala Phe
 1 5 10 15

Met Phe Ile Ile Phe Leu Tyr Val Val Leu Tyr Ile Lys Arg Arg Ile
 20 25 30

Tyr Glu Ile Leu Asn Glu Asn Ile Pro Ile Glu Ile Asn Ile Asp Asn
 35 40 45

Val Asn Tyr Pro Ser Glu Leu Tyr Thr Asp Lys Phe Asn Pro Asn Val
 50 55 60

Leu Lys Tyr Leu Ile Lys Ile Leu Leu Asp Phe Asn Thr Glu Ile Thr
 65 70 75 80

Asn Asn Ile Ile Ile His Ser Ile Asp Tyr Met Lys Ile Tyr Tyr Ile
 85 90 95

Ser Tyr Asn Lys Lys Lys Ile Ile Lys Leu Ile Leu Asp Arg Tyr Asn
 100 105 110

Asn Leu Trp Ile Val Ile Arg Gly Thr Leu Thr Tyr Asn Glu Phe Glu
 115 120 125

His Asp Leu Arg Ile Ser Gln Val Lys Ile Asp Asn Cys Asp Met Lys
 130 135 140

Cys His Lys Gly Phe Cys Glu Ile Tyr Ser Lys Ile Gln Lys Pro Leu
 145 150 155 160

Leu Asn Leu Leu Met Thr Leu Ser Pro Asn Lys Ile Phe Ala Leu Gly
 165 170 175

His Ser Leu Gly Gly Gly Ile Leu Ser Ile Ala Ala Tyr Asp Ile Phe
 180 185 190

Asn Ile Leu Asn Lys Lys Glu Ile Ile Leu Tyr Thr Thr Gly Thr Pro
 195 200 205

Arg Val Cys Asn Lys Asp Phe Tyr Asn Asn Cys Asn Lys Tyr Asn Ile
 210 215 220

His Lys Val Glu Asn Leu Ser Asp Val Tyr Ile Asn Ala Ile Pro Ser
 225 230 235 240

Val Leu Pro Phe Tyr Asp Asn Thr Val Tyr Tyr Lys Ile Gly Lys Ile
 245 250 255

Trp Tyr Phe Asp Val Asn Tyr Gly Asn Ile Ile Leu His Lys Leu Glu
 260 265 270

Ile Tyr Phe Asn Asn Ile Asp Asn Leu Lys Tyr Leu Glu Ile
 275 280 285

<210> 13

<211> 151

<212> PRT

<213> Amsacta moorei entomopoxvirus

<400> 13

Met Lys Ala Ile Cys Val Met Thr Gly Lys Val Asn Gly Ile Ile Tyr
 1 5 10 15

Phe Ile Gln Asn Ile Lys Gly Gly Ser Val His Val Lys Gly Lys Ile
 20 25 30

Val Gly Leu Ser Lys Gly Leu His Gly Phe His Val His Glu Tyr Gly
 35 40 45

Asp Val Ser Asn Gly Cys Thr Ser Ala Gly Glu His Phe Asn Pro Tyr
 50 55 60

Asn Arg Gln His Gly Asp Ile Ser Asp Lys Ile His Arg His Val Gly
 65 70 75 80

Asp Phe Gly Asn Val Tyr Ala Asp Glu Asn Gly Val Ala Asn Ile Asp
85 90 95

Phe His Asp Asp Ile Ile Ser Leu Cys Gly Thr Asn Asn Ile Ile Gly
100 105 110

Arg Thr Leu Val Val His Asp Ser Pro Asp Asp Leu Gly Lys Thr Asp
115 120 125

Pro Leu Ser Lys Thr Ser Gly Asn Ser Gly Gly Arg Leu Gly Cys Gly
130 135 140

Ile Ile Gly Ile Ala Lys Asp
145 150

<210> 14

<211> 453

<212> PRT

<213> Amsacta moorei entomopoxvirus

<400> 14

Met Tyr Asn Asn Glu Tyr Phe Thr Asn Arg Val Lys Ile His Lys Lys
1 5 10 15

Ile Asp Thr Ile Asn Lys Asn Val Leu Tyr Leu Ala Tyr Arg Asp Leu
20 25 30

Arg Val Tyr Asp Asn Trp Ser Phe Leu Tyr Ser Gln Asn Ile Ala Tyr
35 40 45

Leu Asn Asn Ser Ser Met Tyr Val Leu Tyr Leu Ile Asn Lys Asn Asn
50 55 60

Asn Ile Asn Ile Arg Gln Tyr Lys Phe Leu Tyr Glu Gly Leu Pro Glu
65 70 75 80

Phe Glu Ser Gln Cys Lys Lys Cys Asn Val Ser Phe His Leu Leu Ser
85 90 95

Tyr Asn Asn Asn Ile Ile Ser Asn Phe Ile Asn Lys Tyr Lys Ile Gly

100

105

110

His Val Ile Ile Glu Gln Met Pro Leu Leu Phe His Lys Lys Tyr Tyr
 115 120 125

Leu Asp Pro Leu Lys Lys Leu Asn Val Asn Val Tyr Ile Val Asp Ser
 130 135 140

His Asn Ile Ile Pro Val Trp Val Thr Ser Asp Lys Gln Glu Tyr Asn
 145 150 155 160

Ala Arg Thr Ile Arg Ile Lys Ile Asn Lys Leu Lys Asp Gln Tyr Leu
 165 170 175

Ile Glu Phe Pro Lys Val Lys Ile Ser Asn Ile Gln Pro Ile Phe Val
 180 185 190

Glu Asn Asn Phe Asp Ile Ile Pro Asn Tyr Asp Lys Lys Leu Ile Asn
 195 200 205

Ile Tyr Glu Ile Val Gly Gly Tyr Thr Asn Gly Ile Asn Arg Met Asn
 210 215 220

Asn Phe Phe Lys Asn Lys Ile Asn Thr Tyr Lys Asp Lys Lys Asn Asn
 225 230 235 240

Pro Asn Tyr Glu Asn Thr Ser Ile Leu Ser Pro Trp Leu His Cys Gly
 245 250 255

Met Ile Ser Ala Gln Arg Cys Val Leu Glu Ala Asn Lys Leu Lys Lys
 260 265 270

Ile Lys Asp Tyr Asn Ile Glu Ser Ile Asp Ser Phe Ile Glu Glu Ile
 275 280 285

Phe Ile Arg Lys Glu Leu Ser Asp Asn Phe Cys Tyr Tyr Asn Asn Asn
 290 295 300

Tyr Lys Ser Phe Ala Ser Cys Pro Asn Trp Ala Ile Leu Thr Leu Glu
 305 310 315 320

Ile His Lys Thr Asp Lys Arg Asn Lys Ile Phe Ser Leu Arg Glu Leu
 325 330 335

Glu Tyr Gly Lys Thr Asp Asn Lys Leu Trp Asn Tyr Cys Gln Tyr Tyr
 340 345 350

Leu Leu Lys Phe Gly Tyr Leu Asn Gly Tyr Met Arg Met Phe Trp Ala
 355 360 365

Lys Lys Leu Ile Glu Trp Thr Asn Ser Pro Gln Asp Ala Ile Asp Lys
 370 375 380

Thr Ile Tyr Leu Asn Asp Lys Tyr Phe Phe Asp Gly Tyr Asp Pro Met
 385 390 395 400

Gly Tyr Val Asn Ile Leu Trp Ser Ile Gly Gly Leu His Asp Arg Ala
 405 410 415

Phe Lys Glu Arg Glu Met Tyr Gly Lys Ile Arg Phe Met Ser Gln Pro
 420 425 430

Leu Met Tyr Lys Lys Leu Asn Val Asn Asp Phe Tyr Asn Asn Phe Asp
 435 440 445

Asn Val Ile Lys Ser
 450

<210> 15

<211> 263

<212> PRT

<213> Amsacta moorei entomopoxvirus

<400> 15

Met Met Asp Asp Ile Asn Leu Tyr Asn Glu Ser Glu Arg Leu Gln Thr
 1 5 10 15

Phe Glu Asn Trp Pro Ile Asn Phe Ile Thr Pro Glu Ser Phe Ala Ser
 20 25 30

Asn Gly Phe Tyr Tyr Ile Gly Glu Asn Asp Thr Val Lys Cys Val Tyr
 35 40 45

Cys Gly Val Gln Ile Asn Lys Trp Val Glu Gly Asp Lys Pro Glu Ile
 50 55 60

Asp His Lys Lys Phe Ser Pro Asn Cys Ser Phe Leu Lys Ser Asn Asp
 65 70 75 80

Gly Ile Asp Glu Cys Gly Asn Asn Lys Asn Ile Ser Asn Ile Thr Gln
 85 90 95

Lys Gly Ala Val His Pro Asn Leu Ser Asn Ile Val Glu Arg Leu Lys
 100 105 110

Thr Tyr Lys Glu Trp Pro Ile Ser Met Pro Ile Ser Thr Glu Lys Leu
 115 120 125

Glu Ala Gly Phe Phe Tyr Thr Gly Lys Ser Asp Lys Val Lys Cys Phe
 130 135 140

Tyr Cys Asp Gly Gly Leu Asn Lys Trp Glu Thr Asp Asp Asp Pro Trp
 145 150 155 160

Ile Gln His Ala Arg Trp Phe Asp Lys Cys Asp Tyr Val Lys Leu Val
 165 170 175

Lys Gly Lys Asp Phe Ile Gln Lys Val Met Thr Gln Ser Thr Phe Ile
 180 185 190

Lys Ser Ser Lys Lys Glu Asn Ile Pro Glu Ile Asn Ile Ser Asn Asp
 195 200 205

Glu Lys Asn Asp Ile Lys Leu Cys Lys Ile Cys Tyr Ile Glu Glu Arg
 210 215 220

Val Ile Cys Phe Val Pro Cys Gly His Ile Phe Cys Cys Gly Lys Cys
 225 230 235 240

Ala Ile Ser Met Asp Lys Cys Pro Val Cys Arg Asn Lys Ile Lys Asn
 245 250 255

Leu Thr Arg Val Tyr Tyr Pro
 260

<210> 16

<211> 295

<212> PRT

<213> Amsacta moorei entomopoxvirus

<400> 16

Met Asn Phe Met Pro Gln Tyr Tyr Tyr Ile Ser Asp Ile Asn Asn Glu
 1 5 10 15

Ile Glu Tyr Asp Glu Asn Phe Asn Pro Gly Lys Lys Phe Asp Phe Lys
 20 25 30

Arg Gln Gly Gln Ile Lys Leu Leu Met Asn Glu Ile Arg Phe Leu Thr
 35 40 45

Glu Asp Val Glu Leu His Lys Asn Tyr Lys Asn Glu Asn Ile Asn Ile
 50 55 60

Leu Tyr Ile Gly Ser Gly Lys Gly Tyr His Ile Pro Leu Leu Ile Asn
 65 70 75 80

Met Tyr Ser Asp Tyr Lys Ile Gln Trp Asp Leu Tyr Asp Pro Cys Gly
 85 90 95

His Cys Glu Lys Leu Tyr Asn Ile Gln Lys Asn Asn Asn Asn Ile Lys
 100 105 110

Ile Tyr Asp Thr Tyr Phe Asn Lys Ser Asp Val Glu Lys Tyr Glu Asn
 115 120 125

Ile Asp Asn Leu Leu Phe Ile Thr Asp Ile Arg Thr Val Asp Asn Pro
 130 135 140

Asp Asp Glu Pro Asn Thr Lys Asn Leu Ile Asn Asp Tyr Glu Leu Gln
 145 150 155 160

Asn Tyr Ile Leu Lys Glu Leu Lys Pro Ile Ser Leu Val Lys Gln Arg
 165 170 175

Asp Pro Phe Pro Asn Asp Trp Asp Asp Ser Tyr Lys Leu Ser Ile Pro

| | | |
|---|-----|-----|
| 180 | 185 | 190 |
| Asp Gly Lys Glu Tyr Ile Gln Cys Phe Gln Lys Tyr Asn Ser Ala Glu | | |
| 195 | 200 | 205 |
| Tyr Arg Ile Phe Ile Ser Gly Ile Thr Thr Phe Val Asp Ile Asn Ser | | |
| 210 | 215 | 220 |
| Val Ile Leu Asn Lys Arg Gly Ile Asp Arg Lys Leu Ala Trp Tyr Asn | | |
| 225 | 230 | 235 |
| Met Lys Tyr Arg Phe Gln Asn Asp Asn Asp Tyr Lys Ile Ala Tyr Arg | | |
| 245 | 250 | 255 |
| Ile Leu Asn Lys Tyr Ile Lys Ser Glu Asn Lys Pro Ile Leu Lys Lys | | |
| 260 | 265 | 270 |
| Tyr Asn Asn Ile Asn Lys Asn Asn Ile Lys Asn Val Ile Arg Ser Leu | | |
| 275 | 280 | 285 |
| Ser Lys Glu Met Gly Tyr Tyr | | |
| 290 | 295 | |

<210> 17

<211> 292

<212> PRT

<213> Amsacta moorei entomopoxvirus

<400> 17

| |
|---|
| Met Asp Val Asn Lys Tyr Ile Tyr Glu Tyr Asn Lys Pro Leu Tyr Tyr |
| 1 5 10 15 |
| Thr Tyr Tyr Asp Leu Cys Arg Asn Met Asn Asp Val Ile Tyr Asp Tyr |
| 20 25 30 |
| Asn Asn Asn Thr Ile Lys Lys Tyr Met Asp Ile Leu Leu Ser Gln Ile |
| 35 40 45 |
| Gln Phe Leu Ser Asn Ile Asn Ile Lys Lys Ile Cys Asn Asn Thr Asn |
| 50 55 60 |

Gly Ile Val Asn Ile Leu Tyr Ile Gly Ser Ser Lys Ala Tyr His Phe
65 70 75 80

Asn Ile Leu Asn Glu Leu Tyr Lys Asn Leu Thr Asn Ile Gln Trp Tyr
85 90 95

Phe Tyr Asp Ile Ile Asp Pro Cys Ile Ser Val Glu Arg Leu Ser Tyr
100 105 110

Asn Ile Ile Phe Asn Arg Leu Phe Thr Glu Asp Asp Ile Ile Asp Phe
115 120 125

Lys Asp Lys Tyr Pro Leu Ile Leu Ile Tyr Asp Tyr Asp Asp Lys Ser
130 135 140

Asn Val Arg Asp Leu Leu Tyr His Tyr Asn Met Gln Asn Asn Ile Ile
145 150 155 160

Ile Tyr Leu Asn Pro Thr Tyr Ser Leu Leu Lys Phe Lys Tyr Met Pro
165 170 175

Ile Asn Lys Trp Asn Asn Ser Phe Asn Asp Tyr Glu Tyr Ile Ser Thr
180 185 190

Gly Ile Lys Tyr Leu Pro Thr Ile Lys Ser Leu His Thr Arg Asn Ile
195 200 205

Ile Asp Asn Lys Asn Ile Met Thr Leu Thr Phe Asp Glu Ile Glu Ser
210 215 220

Glu Asn Tyr Tyr Glu Lys Met Asn Tyr Tyr Asn Asn Cys Ser Gly Tyr
225 230 235 240

Asn Asp Ile Tyr Asn Asn Ile Ser Gly Tyr Ile Leu Asn Lys Ser Asn
245 250 255

Leu Tyr Asp Asn Asn Asn Ser Ala Tyr Asn Ile Leu Lys Ile Tyr Glu
260 265 270

Lys Asn Ile Ile Asn Thr Ile Asn Glu Asp Lys Ile Phe Arg Ser Lys
275 280 285

Glu Lys Tyr Ile
290

<210> 18

<211> 1089

<212> PRT

<213> Amsacta moorei entomopoxvirus

<400> 18

Met Pro Phe Leu Gly Thr Gly Ile Leu Lys Phe Asp Ile Thr Gln Leu
1 5 10 15

Gln Asn Lys Glu Lys Gly Ser Asp Tyr Asn Ala Ile Arg Tyr Leu Lys
20 25 30

Arg Ile Leu Asn Lys Pro Cys Asp Asn Asp Asp Ile Leu Ile Pro Tyr
35 40 45

Asp Lys Leu Glu Ser Lys Glu Ile Asn Ile Ile Tyr Asn Trp Tyr Ile
50 55 60

Ile Lys Pro Ser Ser Leu Glu Gln Phe Ile Val Cys Lys Cys Lys Asp
65 70 75 80

Tyr Asp Thr Glu Glu Ile Ile Tyr Ile Leu Phe Asp Ile Tyr Glu Tyr
85 90 95

Phe Leu Cys Asp Tyr Glu Leu Ser Glu Ser Asn Thr Lys Leu Lys Asn
100 105 110

Ile Lys Asn Asn Ile Lys Tyr Lys Asn Ser Phe Asn Ser Ser Tyr Leu
115 120 125

Val Leu Glu Asp Tyr Lys Ile Ile Thr Asn Glu Val Asn Ile Gln Tyr
130 135 140

Tyr Tyr Asn Tyr Thr Glu Asp Ser Lys Ile Thr Leu Asn Asn Asn Asp
145 150 155 160

Leu Val Leu Phe Met Thr Pro Tyr Lys Ile Glu Lys Ile Tyr Ser Lys
 165 170 175

Asn Ile Phe Ile Asn Gln Tyr Arg Trp Phe Tyr Val Leu Asn Asn Ile
 180 185 190

Glu Pro Ser Gly Ser Tyr Arg Ile Asn Met Asp Asn Met Gln Lys Ile
 195 200 205

Lys Thr Tyr Asn Lys Asn Lys Thr Ser Tyr Tyr Cys Lys Asn Pro Lys
 210 215 220

Leu Leu Phe Ser Asn Tyr Val Lys Ile Asp Lys Ile Pro Ala Ser Arg
 225 230 235 240

Val Ser Ile Asp Ile Glu Cys Gln His Phe Gly Glu Phe Pro Thr Ala
 245 250 255

Asn Lys Phe Pro Ile Ser His Ile Cys Ile Asp Trp Tyr Met Asp Lys
 260 265 270

Asn Thr Asn Pro Ile Lys Lys Ile Ile Thr Leu Ile Asn Tyr Glu Ile
 275 280 285

Ile Lys Asn Tyr Val Gly Lys Lys Asp Lys Phe Ile Tyr Thr Glu Val
 290 295 300

Asn Lys Leu Leu Asn Thr Asn Lys Val Tyr Ile Thr Ile Tyr Cys Thr
 305 310 315 320

Glu Lys Tyr Met Leu His Phe Val Leu Tyr Thr Leu Arg Gln Asp Phe
 325 330 335

Asp Tyr Val Leu Thr Tyr Asn Gly His Asn Phe Asp Phe Thr Tyr Ile
 340 345 350

Gln Arg Arg Lys Ile Asn Lys Leu Lys Gly Leu Cys Leu Asp Asn Val
 355 360 365

Tyr Ser Thr Asn Glu Ile Lys Ile Ser Lys Phe Ser Tyr Asn Gln Asp
 370 375 380

Thr Thr Tyr Glu Ile Asp Ser Thr Asn Gly Ile Ile Phe Leu Asp Leu

| | | | | | | |
|---|-----|-----|-----|-----|-----|-----|
| 385 | | 390 | | 395 | | 400 |
| Tyr Asn Tyr Ile Lys Lys Thr Tyr Pro Ser Ser Asn Tyr Lys Leu Ser | | | | | | |
| | 405 | | | 410 | | 415 |
| Glu Ile Thr Lys Glu Arg Phe Asn Ile Phe Cys Lys Ile Ser Tyr Asn | | | | | | |
| | 420 | | 425 | | | 430 |
| Asn Asn Glu Tyr Ile Ile Glu Pro Leu Asn Thr Lys Ala Asn Lys Asn | | | | | | |
| | 435 | | 440 | | | 445 |
| Lys Ile Ser Ile Phe Tyr Asp Val Ile Arg Thr Ala Asn Tyr Cys Phe | | | | | | |
| | 450 | | 455 | | | 460 |
| Ile Asn Asn Asn Pro Tyr Lys Lys Asn Lys Thr Glu Ile Ile Asp Asp | | | | | | |
| | 465 | | 470 | | 475 | 480 |
| Ile Glu Lys Leu Tyr Asp Leu Thr Ser Ile Lys Asn Ser His Asn Lys | | | | | | |
| | 485 | | 490 | | | 495 |
| Lys Phe Thr Ile Tyr Glu Asn Asp Ile Pro Ile Asn Asp Asn Tyr Ala | | | | | | |
| | 500 | | 505 | | | 510 |
| Thr Val Met Leu Ser Lys Asp Asp Val Asp Ile Gly Asp Lys Asn Ala | | | | | | |
| | 515 | | 520 | | | 525 |
| Tyr Val Phe Thr Lys Glu Lys Ser Asp Asn Ile Ala Tyr Tyr Cys Thr | | | | | | |
| | 530 | | 535 | | | 540 |
| His Asp Thr Val Leu Cys Asn Cys Ile Phe Lys Tyr Asp Met Ile His | | | | | | |
| | 545 | | 550 | | 555 | 560 |
| Asp Lys Ile Ile Ala Phe Ser Asn Glu Tyr Leu Leu Pro Gln Cys Met | | | | | | |
| | 565 | | 570 | | | 575 |
| Ala Phe Lys Tyr Lys Ser Ser Asn Asn Ile Ser Gly Leu Leu Lys Thr | | | | | | |
| | 580 | | 585 | | | 590 |
| Leu Tyr Ser Asn Lys Thr Met Ile Tyr Pro Gly Asn Val Glu Phe Glu | | | | | | |
| | 595 | | 600 | | | 605 |
| Lys Phe Glu Gly Gly Tyr Val Ile Glu Pro Lys Gln Lys Tyr Ile Asp | | | | | | |
| | 610 | | 615 | | | 620 |

Ser Leu Thr Ala Val Phe Asp Phe Asn Ser Glu Tyr Pro Ser Ile Ile
625 630 635 640

Ile Glu Ala Asn Leu Ser Pro Glu Val Val Lys Val Ile Lys Leu Phe
645 650 655

Asp Asp Glu Glu Ala Ala Asn Lys Val Glu Lys Tyr Leu Lys Asp Asn
660 665 670

Tyr Lys Tyr Pro Asp Tyr Cys Tyr Ile Lys Ile Ile Lys Asp Lys Met
675 680 685

Tyr Lys Phe Ile Leu Met Asp Arg Arg Glu Leu Gly Val Thr Thr Gln
690 695 700

Met Val Lys Gly Arg Glu Met Lys Asn Met Tyr Lys Asp Leu Lys Asn
705 710 715 720

Lys Asn Lys Asp Asn Val Asp Leu His Asn Phe Tyr Ser Ser Ala Leu
725 730 735

Tyr Ser Lys Lys Ile Thr Ile Asn Ser Met Tyr Gly Leu Ser Gly Ser
740 745 750

Glu Arg Phe Ile Phe Asn Ser Pro Tyr Cys Ala Glu Tyr Cys Val Gln
755 760 765

Gly Gln Asn Cys Ile Lys Tyr Ile Gln Thr Leu Val Asn Asn Ser Lys
770 775 780

Tyr Ile Asp Asn Val Leu Ile Leu Asn Lys Cys Asn Asn Pro Phe Thr
785 790 795 800

Asn Glu Pro Ile Lys Thr Asn Tyr Pro Gly Asn Leu Asn Val Asn Phe
805 810 815

Thr Phe Asn Val Lys Tyr Gly Asp Thr Ser Leu Phe Ile Thr Val Asn
820 825 830

Phe Glu Ser Lys Phe Asn Ser Lys Glu Glu Lys Val Lys Val Gly His
835 840 845

Lys Cys Phe Thr Phe Leu Gly Asn Val Ile Asn Asp Lys Lys Asn Lys
 850 855 860

Ile Leu Thr Asp Asn Phe Glu Phe Glu Tyr Glu Lys Met Tyr Tyr Trp
 865 870 875 880

Met Ile Leu Leu Lys Lys Lys Tyr Ile Gly Glu Val Val Ile Asn Met
 885 890 895

Asp Pro Leu Gln Leu Met Asp Asp Thr Lys Gly Thr Ala Leu Ile Arg
 900 905 910

Arg Asp Cys Thr Val Ile His Lys Thr Ile Leu Lys Asn Thr Ile Asn
 915 920 925

Ile Leu Lys Asp Phe Leu Thr Asn Asp Asn Thr Gly Ile Asn Ile Asn
 930 935 940

Val Lys Ile Asn Asp Tyr Leu Ser Ser Ala Phe Lys Asn Ile Ile Glu
 945 950 955 960

Asn Ile Gln Asn Leu Asp Ile Asn Asp Phe Lys Lys Ser Val Lys Tyr
 965 970 975

Ser Gly Val Tyr Lys Asp Pro Asn Tyr Pro Ile Glu Leu Cys Val Lys
 980 985 990

Glu Tyr Asn Leu Lys Asn Pro Asn Asp Lys Ile Thr Lys Gly Gln Arg
 995 1000 1005

Phe Asp Phe Ile Tyr Ala His Lys Ile Asn Glu Trp Ser Lys Asp
 1010 1015 1020

Lys Lys Trp Asn Ile Lys Tyr Thr Ile Asp Ile Ser Lys His Val
 1025 1030 1035

Ile Ile Leu Glu Asp Tyr Leu Lys Asn Lys Asn Asn Tyr Arg Ile
 1040 1045 1050

Cys Val Glu Lys Tyr Ile Lys Asp Ile Leu Ser Asn Leu Asp Gln
 1055 1060 1065

Ile Ile Asn Asp Lys Asn Ile Ile Lys Asn Ile Asp Ile Met Leu
 1070 1075 1080

Asn Ser Tyr Glu Pro Gln
 1085

<210> 19

<211> 611

<212> PRT

<213> Amsacta moorei entomopoxvirus

<400> 19

Met Asn Asp Ile Asp Lys Asn Asn Ile Leu Asn Asn Lys Tyr Ile Gly
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Phe His Thr Ile Lys Glu Tyr Leu Asp Lys Tyr Lys Cys Pro Leu Gln
 20 25 30

Phe Phe Val Gly Ala Pro His Ser Tyr Gln Ser Thr Glu Tyr Leu Asn
 35 40 45

Lys Ser Tyr Thr Gly Arg Thr Ile Phe Val His Ser Lys Tyr Val Gly
 50 55 60

Asn Ile Ala Lys Asp Lys Asn Ser Val Ala Leu Arg Asn Ile Lys Lys
 65 70 75 80

Glu Leu Leu Tyr Leu Gln Asn Met Glu Ile Asn Asn Ser Gly Thr Val
 85 90 95

Val His Leu Ser Leu Tyr Tyr Asn Lys Asn Gln Glu Glu Ser Leu Lys
 100 105 110

Tyr Val Ala Asn Glu Leu Asn Lys Phe Cys Lys Val Leu Asp Asn Ile
 115 120 125

Asp Asn Asn Tyr Phe Asn His Ile Ile Phe Glu Thr Thr Asn Asp Ile
 130 135 140

Arg His Leu Gly Ala Lys Thr Glu Asp Phe Lys Ile Leu Tyr Asp Asn

| | | | | | | |
|-----------------|---------------------|-----------------|-----------------|-----|-----|-----|
| 145 | | 150 | | 155 | | 160 |
| Leu Asp Ser Asn | Ala Lys Lys Arg Ile | Lys Phe Cys Ile | Asp Thr Ser | | | |
| | 165 | | 170 | | 175 | |
| His Ile Phe Val | Thr Phe Tyr Asn | Ile Asn Thr Val | Lys Gly Met Ile | | | |
| | 180 | | 185 | | 190 | |
| Asn Tyr Leu Ala | Lys Phe Asp Leu | Leu Ile Gly Leu | Asp Lys Ile Ile | | | |
| | 195 | | 200 | | 205 | |
| Leu Ile His Leu | Asn Asp Ser Cys | Gly Leu Pro Leu | Ser Ser Tyr Lys | | | |
| | 210 | | 215 | | 220 | |
| Pro His Glu Ala | Ile Gly Lys Gly | Asn Ile Phe Lys | Asn Tyr Lys Asp | | | |
| | 225 | | 230 | | 235 | |
| Asp Leu Ser Ser | Leu His Ile Leu | Lys Thr Tyr Ala | Thr Leu Tyr Asn | | | |
| | 245 | | 250 | | 255 | |
| Ile Pro Cys Ile | Leu Glu Arg Arg | Asn Glu Val Pro | Asp Gln Ser Ile | | | |
| | 260 | | 265 | | 270 | |
| Met Asp Glu Met | Lys Ile Tyr Leu | Asp Ile Lys Gln | Asn Met Asn Ile | | | |
| | 275 | | 280 | | 285 | |
| Asp Asn Phe Met | Ser Met Ile Asn | Lys His Lys Ile | Leu Leu Val Leu | | | |
| | 290 | | 295 | | 300 | |
| Asn Lys Phe Ala | Asp Ile Tyr Asn | Ile Leu Asn Glu | Ile Lys Tyr Lys | | | |
| | 305 | | 310 | | 315 | |
| Ala Phe Leu Asn | Ala Ala Tyr Val | Ile Gln Asn Thr | Pro Val Ile Ile | | | |
| | 325 | | 330 | | 335 | |
| Phe Lys Tyr Lys | Asn Val Asn Asn | Lys Phe Ile Leu | Asn Glu Ser Lys | | | |
| | 340 | | 345 | | 350 | |
| Glu Asn Ile Ile | Gln Lys Tyr Lys | Asn Leu Lys Ser | Ile Gly Thr Ser | | | |
| | 355 | | 360 | | 365 | |
| Ile Ser Asp Ile | Ile Tyr Glu Leu | Leu Ser Thr Asn | Lys Val Glu Lys | | | |
| | 370 | | 375 | | 380 | |

Leu Ile Asn Leu Glu Asn Asn Ser Ser Tyr Lys Tyr Ile Lys Ile Leu
 385 390 395 400

Thr Ser Ile Leu Phe Ile Gly Pro Lys Lys Ala Gln Ser Leu Leu Lys
 405 410 415

Leu Asn Ile Lys Asn Ile Asn Asp Leu Ile Glu Lys Lys Asp Asn Ile
 420 425 430

Ile Asn Met Gly Ile Leu Thr Ile His Glu Ile Lys Ile Ile Glu Tyr
 435 440 445

Ile Lys Asp Met Glu Pro Val Ser Arg Asn Phe Ile Asn Asp Leu Lys
 450 455 460

Gln Asn Ile Asn Leu Ser Ser Glu Cys Glu Trp Tyr Ile Leu Gly Ser
 465 470 475 480

Tyr Ala Arg Gly Leu Asp Tyr Ser Lys Asp Ile Asp Ile Leu Ile Ile
 485 490 495

Asp Phe Thr Ile Asp Lys Phe Leu Glu Glu Leu Lys Lys Ile Ala Lys
 500 505 510

Leu Met Tyr Ile Ile Arg Lys Gly Asn Asn Ile Phe Ser Gly Val Phe
 515 520 525

Leu Trp Gln Gly Lys Lys Phe Ile Leu Glu Ile Asn Lys Val Asn Asn
 530 535 540

Lys Glu Lys Tyr Thr Ala Ile Met His Phe Thr Gly Ser Lys Lys Phe
 545 550 555 560

Asn Ile Phe Met Arg Asn Ile Ala Lys Ser Glu Asn Met Ile Leu Asn
 565 570 575

Gln Tyr Ser Leu Lys Lys Asp Asn Val Glu Leu Pro Ile Thr Lys Glu
 580 585 590

Glu Asp Ile Phe Asp Tyr Leu Lys Ile Lys Tyr Ile Pro Asn Asn Lys
 595 600 605

Arg Asn Ile
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<210> 20

<211> 1381

<212> PRT

<213> Amsacta moorei entomopoxvirus

<400> 20

Met Tyr Phe Asn Ile Leu Asn Gly Leu Leu Trp Lys Tyr Tyr Ile Ile
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Lys Arg Lys Lys Tyr Ile Tyr Asp Met Leu Glu Tyr Leu Leu Leu Ile
20 25 30

Leu Phe Phe Thr Leu Leu Tyr Ser Phe Lys Lys Asn Ile Lys Tyr Tyr
35 40 45

Asp Asn Asp Leu Asn Asn Ile Asn Lys Ile Asn Asn Asn Thr Asn Ile
50 55 60

Ile Tyr Tyr Pro Lys Ser Asn Ile Ser Ile Lys Ile Ile Glu Asn Val
65 70 75 80

Ala Lys Glu Leu Lys Ile Asn Lys Tyr Tyr Gly Ser Ser Asn Glu Asn
85 90 95

Glu Ile Ile Asn Phe Ile Asp Thr Asn Glu Thr Ile Phe Ile Leu Phe
100 105 110

Asn Asn Thr Cys Glu Asn Leu Leu Tyr Thr Ile Arg Phe Asn Asn Asn
115 120 125

Glu Asn Asn Asp Arg Leu Leu Ile Asn Ile Gln Trp Leu Ile Asn Met
130 135 140

Asn Tyr Leu Arg Leu Leu Ser Asn Lys Asn Ile Asn Ile Asp Ile Asp
145 150 155 160

Ile Asn Glu Tyr Ile Tyr Lys Asn Phe Asn Thr Asn Ile Leu Phe Tyr
 165 170 175

Thr Tyr Tyr Ser Ile Leu Ile Ile Ala Phe Ile Ser Phe Ile Leu Lys
 180 185 190

Asn Asn Asn Asp Asn Asn Asp Pro Met Phe Lys Ile Ile Lys Val Pro
 195 200 205

Lys Ile Leu Ile Tyr Ile Ser Asn Phe Ile Cys Ser Ile Pro Phe Gly
 210 215 220

Ile Ile Tyr Ser Val Phe Gly Thr Ile Ile Leu Thr Ile Ser Glu Asp
 225 230 235 240

Pro Leu Ile Asn Asn Asn Asn Asn Ile Ile Met Phe Leu Ile Leu Leu
 245 250 255

Ile Tyr Phe Ile Ser Val Ile Ser Met Ala Tyr Leu Asn Phe Phe Ile
 260 265 270

Leu Leu Ile Tyr Lys Tyr Lys Ile Phe Val Ile Met Cys Val Tyr Val
 275 280 285

Leu Thr Ile Ile Pro Ile Thr Leu Tyr Asn Asn Leu Asn Ser Asp Ile
 290 295 300

Asn Ile Phe Ile Gly Leu Ile Pro His Ile Pro Leu Tyr Trp Ile Phe
 305 310 315 320

Asp Gln Leu Asn Tyr Val Glu Lys Gln Asn Lys Ser Leu Thr Phe Asn
 325 330 335

Asn Asn Ile Ser Tyr Ser Ile Tyr Ser Lys Ser Ile Leu Ile Ser Ile
 340 345 350

Ile Tyr Leu Ile Leu Gln Ser Phe Ile Tyr Ile Ser Ile Ile His Ile
 355 360 365

Ile Lys Leu Ile Tyr Lys Ile Cys Lys Lys Tyr Met Lys Met Lys Tyr
 370 375 380

Ile Tyr Ile Ile Asn Glu Asn Asn Asn Tyr Met Leu Glu Thr Glu Asn

| | | | | | | |
|---|---|---------|-----|-----|-----|-----|
| 385 | | 390 | | 395 | | 400 |
| Asn Asp Tyr Tyr | Val Lys Ile Gln Asn Ile Tyr Lys Tyr Tyr | Asp Asn | | | | |
| | 405 | | 410 | | 415 | |
| Asn Phe Ile Leu | Asn Asn Ile Cys Leu Asp Ile Ile Lys Asn Asn Thr | | | | | |
| | 420 | | 425 | | 430 | |
| Thr Val Leu Leu Gly | Asn Asn Ser Ala Gly Lys Ser Thr Leu Leu Ser | | | | | |
| | 435 | | 440 | | 445 | |
| Ile Ile Phe Gly Leu Ile Lys Pro Asn Lys Gly Lys Ile Leu Thr Asn | | | | | | |
| | 450 | | 455 | | 460 | |
| Asn Ile Lys Ile Gly Tyr Cys Pro Gln Asn Asn Ile Phe Thr Asp Phe | | | | | | |
| | 465 | | 470 | | 475 | |
| Thr Val Lys Glu Asn Ile Tyr Leu Phe Asn Ile Leu Arg Gly Leu Ser | | | | | | |
| | 485 | | 490 | | 495 | |
| Ser Leu Gln Ser Lys Ile Lys Thr Asn Glu Ile Ile Ile Tyr Leu Lys | | | | | | |
| | 500 | | 505 | | 510 | |
| Leu His Asp Ile Glu Asn Cys Ile Ile Thr Glu Leu Ser Glu Cys Ser | | | | | | |
| | 515 | | 520 | | 525 | |
| Lys Arg Lys Leu Gln Leu Ala Phe Ser Leu Ile Asp Asp Ser Asp Phe | | | | | | |
| | 530 | | 535 | | 540 | |
| Ile Leu Ile Asp Glu Pro Thr His Asn Ile Asp Leu Lys Ser Lys Gln | | | | | | |
| | 545 | | 550 | | 555 | |
| Glu Ile Trp Asp Leu Ile Ser Leu Leu Lys Arg Asn Lys Thr Ile Leu | | | | | | |
| | 565 | | 570 | | 575 | |
| Ile Thr Thr His Cys Ile Asp Glu Val Glu Leu Leu Ala Asp Asn Leu | | | | | | |
| | 580 | | 585 | | 590 | |
| Ile Ile Leu Asn Asn Gly Asn Val Lys Tyr Asn Ser Thr Leu Phe Asn | | | | | | |
| | 595 | | 600 | | 605 | |
| Ile Lys Lys Asp Ala Asn Val Thr Tyr Lys Leu Ser Ile His Asn Asn | | | | | | |
| | 610 | | 615 | | 620 | |

Ser Thr Asp Asp Lys Ile Lys Asn Ile Ile Ile Asn Ser Gly Phe Ile
625 630 635 640

Ile Leu Asn Ile Asn Lys Ile Asp Glu Asn Asn Ser Ile Tyr Asn Ile
645 650 655

Tyr Lys Thr Glu Asn Ser Asn Phe Leu Lys Leu Phe Glu Leu Leu Glu
660 665 670

Asn Val Asn Cys Asp Ile Ile Tyr Phe Lys Ser Asn Thr Leu Asn Asp
675 680 685

Ile Leu Tyr Lys Leu Cys Ser Glu Asp Ile Ile Ile Pro Asp Asp Ser
690 695 700

Tyr Ile Asn Asn Leu Asn Tyr Asn Asp Met Phe Ile Ser Glu Ile Met
705 710 715 720

Gly Phe Asn Lys Ile Met Arg Gln Phe Ile Glu Leu Phe Lys Arg Asn
725 730 735

Ile Tyr Tyr Ile Arg Lys Asn Ile Leu Leu Phe Val Ile Ile Asn Phe
740 745 750

Ile Leu Ser Ile Leu Ile Val Tyr Val Gly Ile Val Tyr Ile Lys Lys
755 760 765

Tyr Glu Asn Leu Tyr Leu Tyr Asn Phe Val Ile Ile Asn His Asn Ile
770 775 780

Asp Asn Phe Ile Asn Asn Ser Asn Tyr Leu Leu Asp Ile Lys His Asn
785 790 795 800

Ser Thr Tyr Asn Lys Ile Thr Tyr Ile Pro Leu Phe Lys Tyr Ser Gly
805 810 815

Ser Ile Ala Ile Asn Ile Ile Ser Asn Ile Ile Ala Lys Ile Asn Ile
820 825 830

Pro Asn Ile Glu Lys Asp Ile Ile Thr Thr Ile Phe Tyr Pro Met Tyr
835 840 845

Gln Asn Lys Thr Ser Ile Leu Thr Asn Leu Phe Ile Ser Ile Ile Leu
 850 855 860

Gln Leu Tyr Cys Ile Asn Tyr Asn Lys Leu Ile Lys Lys Asp Asn Ile
 865 870 875 880

Asn Lys Thr Arg Lys Gln His Ile Ile Asn Gly Cys Asn Pro Glu Leu
 885 890 895

His Trp Ile Thr Thr Leu Leu Phe Asn Met Ile Leu Phe Ser Ile Ser
 900 905 910

Val Ile Pro Ile Ile Leu Tyr Met Leu Asn Ile Lys Ser Phe Phe Asp
 915 920 925

Leu Ile Ile Leu Tyr Phe Ile Leu Ile Ile Asn Ala Leu Ser Phe Met
 930 935 940

Leu Phe Ser Ile Ile Ile Leu Met Phe Asp Asn Gln Ser Asp Lys Ile
 945 950 955 960

Ile Leu Ile Leu Val Phe Ile Leu Gly Ile Leu Leu Pro Ile Tyr Lys
 965 970 975

Ile Lys Tyr Lys Asn Ile Ile Leu Asp Ile Leu Ser Tyr Ile Phe Ile
 980 985 990

Pro Ser Cys Ile Ser Met Ser Ile Ile Glu Tyr Leu Asn Thr His Lys
 995 1000 1005

Leu Asn Tyr Ile Ile Ser Ile Ile Ile Gln Ile Leu Leu Tyr Leu
 1010 1015 1020

Ile Leu Ile Ile Leu Ile Glu Arg Gly Leu Ile Asp Ile Ile Tyr
 1025 1030 1035

Asn Lys Ile Ile Asn Leu Lys Tyr Asn Arg Lys Asn Asn Asn Tyr
 1040 1045 1050

Phe Glu Leu Gln Asn Ile Asn Lys Tyr Thr Asp Tyr Asn Ser Ser
 1055 1060 1065

Leu Ile Met Ser Asn Val Tyr Lys Ile Tyr Asn Asn Lys Leu Ala
 1070 1075 1080

Leu Asn Asn Ile Asn Phe Lys Ile Ser Glu Gly Lys Cys Phe Gly
 1085 1090 1095

Ile Ile Gly Gly Asn Gly Cys Gly Lys Ser Thr Ile Phe Lys Ile
 1100 1105 1110

Leu Ser Gly Glu Glu Cys Val Thr Lys Gly Asn Ile Tyr Ile Gly
 1115 1120 1125

Cys Ser Asn Arg Ser Trp Ile Leu Lys Ser Asn Tyr Phe Lys Lys
 1130 1135 1140

Ile Ser Tyr Cys Ser Gln Phe Phe Gly Ile Asp Thr Phe Leu Thr
 1145 1150 1155

Gly Arg Gln Asn Leu Lys Leu Ile Met Ile Leu Asn Gly Phe Ser
 1160 1165 1170

Asp Lys His Ile Gln Tyr Tyr Ile Asn Ile Trp Leu Lys Leu Leu
 1175 1180 1185

Asn Ile Glu Lys Tyr Ala Asp Lys Ala Val Tyr Thr Tyr Ser Thr
 1190 1195 1200

Gly Ile Ile Lys Arg Leu Lys Ile Ala Met Ser Leu Ala Pro Arg
 1205 1210 1215

Ser Ile Leu Thr Leu Met Asp Glu Pro Thr Ser Gly Ile Asp Ile
 1220 1225 1230

Val Ser Lys Gln Ile Ile Trp Lys Thr Ile Lys Tyr Ile Ile Asn
 1235 1240 1245

Tyr Asn Tyr Tyr Asn Tyr Tyr Lys His Ser Ile Leu Ile Ser Ser
 1250 1255 1260

Asn Asn Ile Glu Glu Ile Glu Tyr Leu Cys Ser Asn Val Ile Ile
 1265 1270 1275

Leu Asp Ser Gly Asn Ile Met Tyr Asn Asp Thr Leu Glu Asn Ile

1280 1285 1290
 Lys Asn Ile His Ser Thr Lys Ile Ile Asn Ile Lys Leu Leu His
 1295 1300 1305
 Tyr Asp Asn Asn Lys Ile Cys Lys Ile Lys Asn Lys Leu Lys Asn
 1310 1315 1320
 Lys Gly Phe Met Leu Lys Ser Asp Asn Lys Phe Lys Leu Thr Phe
 1325 1330 1335
 Cys Val Ser Lys Asn Ile Asn Leu Lys Tyr Ser Glu Leu Phe Lys
 1340 1345 1350
 Ile Leu Tyr Ile Leu Lys Asn Asn Tyr Ser Asp Ile Ile Asp Gln
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 Tyr Asp Ile Ser Asp Thr Asn Ile Glu Gln Leu Phe Ser
 1370 1375 1380

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 <211> 79
 <212> PRT
 <213> Amsacta moorei entomopoxvirus

 <400> 21
 Met Asn Tyr Tyr Ile Leu Leu Cys Leu Phe Met Leu Phe Ser Ser Ser
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 Tyr Asn Phe Lys Leu Ile Asn Asn Asn Ile Cys Asn Glu Asp Tyr Asp
 20 25 30
 Pro Gly Ile Cys Arg Ile Gly Asp Ile Arg Trp Tyr Tyr Asn Tyr Asn
 35 40 45
 Ile Lys Asp Cys Lys Ile Phe Ile Tyr Gly Gly Cys Gly Gly Asn Met
 50 55 60
 Asn Asn Phe Asn Asn Tyr Glu Asp Cys Ile Asn Lys Cys Leu Ile
 65 70 75

<210> 22

<211> 572

<212> PRT

<213> Amsacta moorei entomopoxvirus

<400> 22

Met Asn Ile Tyr Leu Lys Asn Ala Ser Asn Asp Thr Ile Ser His Leu
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Ser Lys Phe Thr Asn Gln Ile Asn Asp Ile Ile Ser Phe Asp Ile Asn
20 25 30

Asn Phe Thr Lys Asn Val Leu Ile Met Arg Asn Asn Ile Asn Asn Ile
35 40 45

Arg Thr Asn Phe Glu Asn Val Ser Asp Asp Asn Ser Ile Lys Arg Arg
50 55 60

Ile Thr Glu Phe Phe Asp Lys Gln Asn Thr Pro Asn Leu Lys Leu Gly
65 70 75 80

Ser Ile Ile Ser Ile Ile Lys Phe Gln His Leu Thr Val Thr Tyr Val
85 90 95

Asn Lys Ile Ile Lys Glu Ile Val Thr Tyr Lys Cys Asn Thr Arg Glu
100 105 110

Ile Asn Ile Val Asn Phe Ser Ser Val Thr Ser Gln Ile Ser Asn Tyr
115 120 125

Asp Asn Pro Ile Leu Asn Glu Ile Leu Lys Gln Tyr Val Tyr Lys Gln
130 135 140

Lys Leu Lys Asn Val Thr Val Asn Asn Asp Lys Lys Lys Ile Ile Asp
145 150 155 160

Pro Asp Asp Glu Lys Leu Ala Glu Ser Ile Lys Lys Ile Leu Glu Glu
165 170 175

Ile Leu Lys Ile Leu Leu Ile Ile Lys Asn Asn Asp Cys Val Ala Tyr
 180 185 190

Gly Ser Phe Thr Cys Tyr Asn Ile Asn Arg Ser Ile Lys Tyr Asn Asp
 195 200 205

Ile Asp Leu Tyr Ser Thr Asp Ala Tyr Arg Ile Leu Ile Phe Phe Met
 210 215 220

Ile Tyr Ile His Leu Thr Ile Gly His Asp Thr Cys Leu Phe Ser Ile
 225 230 235 240

Pro Phe Ile Thr Gly His Ile Ser Leu Lys Tyr Lys Asn Ile Phe Ile
 245 250 255

Ile Asp Cys Ile Phe Leu Asp Asn Ser Ile Ile Asn Val Ile Asn Lys
 260 265 270

Ser Leu Ile Asn Asn Ile Tyr Phe Ile Asp Pro Gly Leu Gln Met Leu
 275 280 285

Asn Asn Phe Arg Met Leu Ser Glu Asn Phe Arg Ser Tyr Lys Ile Tyr
 290 295 300

Glu Lys Met Glu Glu Ser Leu Asn Lys Tyr Lys Thr Leu Leu Asn Tyr
 305 310 315 320

Phe Val Asn Asn Asn Asn Lys Phe Asn Lys Gln Arg Leu Asn Tyr Trp
 325 330 335

Leu Lys Ser Asp Val Cys Arg Asn Asn Phe Pro Tyr Thr Ile Val Asp
 340 345 350

Asn Thr Ile Leu Ile Ser Ile Lys Glu Leu Ile Asp Ile Ser Pro Tyr
 355 360 365

Asp Tyr Ile Met Ile Val Leu Asp Ser Pro Ser Asp Ile Met Glu Lys
 370 375 380

Leu Ser Asn Ile Ser Gly Leu Phe Ser Arg Lys Tyr Gly Ala Phe Leu
 385 390 395 400

Asn Glu Ile Phe Phe Glu Thr Lys Lys Ile Lys Asn Lys Ile Asn Thr
 405 410 415

Tyr Ala Gly Asn Thr Asn Asn Ile Thr Gln Leu Ile Asp Glu Asn Lys
 420 425 430

Leu Ile Lys Leu Asn Arg Ser Asp Ile Asn Met Pro Tyr Asn Ile Asn
 435 440 445

Pro Asn Lys Lys Tyr Leu Ile Phe Ser Asn Leu Thr Thr Ser Thr Tyr
 450 455 460

Val Tyr Phe Glu Asn Asp Lys Met Thr Asp Ile Ser Val Lys Asn Leu
 465 470 475 480

Ile Ser Phe Ile Ser Thr Ala Cys Leu Tyr Asn Leu Leu His Lys Lys
 485 490 495

Asp Asp Phe Gly Met Glu Leu Tyr Tyr Leu Thr Leu His Cys Leu Thr
 500 505 510

Phe Thr Glu Thr Arg Lys Leu Asn Glu Tyr Lys Val Ile Asp Arg Tyr
 515 520 525

Lys Ile Gly Glu His Lys Glu Ile Ser Leu Cys Lys Asn Leu Phe Asn
 530 535 540

Ser Ile Tyr Lys Asn Lys Ser Met Glu Asp Glu Tyr Met Asp Tyr Asn
 545 550 555 560

Thr Phe Ile Asp Leu Thr Asn Ile Asn Gly Gly Tyr
 565 570

<210> 23

<211> 50000

<212> DNA

<213> Amsacta moorei entomopoxvirus

<400> 23

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| aaatatttag aatttattga aaattagtaa aattagattg ttctaaaaca tatattgatt | 180 |
| ctctaaaagg aatacattat cttactaatt tacaaaaatt aattctttta aagaaatatg | 240 |
| ttgccttaat aatattaaaa aaataaattg ttcatacata atcattgatt ctctaaaagg | 300 |
| aataagtctt aataatttag aagaattata ttgttataat ataaaaattt attcttttaa | 360 |
| tataataata aaaaatctgc ttattaaaaa tattaaatgg ttataaatat ataaattaat | 420 |
| tattttatat aaattattgt taaacattta tattaatatt ctaatattaa aaattgaaaa | 480 |
| aaaaaataat tatgttaaaa tggagttacc tgtagaaatg ttagaaatta tatttaatta | 540 |
| tttagataat gatactaaat tacaatttat agattcaaaa tgtattatat caaaacttat | 600 |
| atataaatta aaatataatt cttgttttaa agaaataaag aattttatta attttaaaga | 660 |
| attaatatat aataattatt atataaaatc tttagaagggt attgaaaatt ttactaaatt | 720 |
| aataaaatta tattgttaca atacaagaat cgattcttta aaaggaatag aaaatctcat | 780 |
| taaattaaaa gaattatatt gttttaatac aaatattaat tcttttagtat atttaaaaaa | 840 |
| tcttattaat ttaacagaat tatattgttt tgaaacaaat atttattctt taaaaggaat | 900 |
| agaaaatctc attaatTTaa aagaatttga ttgttcttat acactaatag attcttttaa | 960 |
| agagataaaa aatcttatta atttacaaaa attaaattgc tcacatacaa ttatttatct | 1020 |
| tctcgaagga atagaaaatc tcattaattt agaaaaacta gattgttctt atacaagtat | 1080 |
| taattcttta aaagaaataa aaaatcttat taatttaaaa aaattagaat gttatgaaac | 1140 |
| aaatatttat tctcttaaag agttacaaaa tctaattaat ttaaaaaaat tagattgttc | 1200 |
| ttatacaaaa attaatctt taaaagaatt acaaaatctt attaatTTaa aaaaattaga | 1260 |
| ttttcataat acaaattttt attcttttaa aggaatagaa aatcttatta atatagaaaa | 1320 |
| attaaattgt tcaaatacaa atattgattc tttaaaatat ttagaaaatc taaccaattt | 1380 |
| aaaaaattta atttggtatg gtataaatat cgattttatc gaaatattaa aaaattta | 1440 |
| taatttagaa gaattagatt gttctgaaac aaaaatagtt tctttaaaag gaatagaaaa | 1500 |
| tcttattaat ttaaaagaat tagattgttc ttatacaaaa attaatctt taaaaggaat | 1560 |
| agaaaatctt attaatTTaa aaaaattaga ttgttcttat acaaaaattg attcttttaa | 1620 |
| acaaacaaaa aatcttatta atttagaaca aatacattgt tatgttacag aacttgattc | 1680 |
| tctaaaagga atagaaaatc ttattaattt aaaaaaatta tttgtcata atacaaaaat | 1740 |
| taattcttta aaaggatatg aaaatcttat taatttagaa atattatatt gtaataatac | 1800 |

| | |
|---|------|
| aaatattatt tctttagaag gaataaaaaa tcttattaaa ttagaagaat tatattattt | 1860 |
| taatacaaat attattttatt aataagttta ttattttattt atagtatata cattaatatt | 1920 |
| attttttaaat aataaataat gccttctgta caagatattg ataattctat tgttaataaa | 1980 |
| atacaaaaata ctaatgagat tttagaaaaa attcttaata ttttaactga attaaaaaca | 2040 |
| gaaattaata gaaaaaatga tgatgaatat tctgatttat atgattcaga ataattaata | 2100 |
| agaatcatat tctatacaac aatcacaaca ccatgcttca aagatagaaa atccacaata | 2160 |
| ttcacattca taaatacaaa cacaatttat atcttcatat ccacattctt cacaaatatc | 2220 |
| catgttaaac atttttattt tatatattta tttttcaata tatttataat aaatgaatgc | 2280 |
| taacgaagat atgttaaagt aaatatatat taaattagat aattattctt tagtttatga | 2340 |
| taaagattta attaacggaa tagcaaatga taaaataaat aaagaatcta ataattataa | 2400 |
| tttattaaaa tctatggaag attgtaaatg tttaatagaa atgtcatata attatttatc | 2460 |
| aaaggatagt ttattagaat taattaaaaa attattaaac gaaaatactt ttttaaaata | 2520 |
| ttatattcaa caaaacaaaa attaatactt tattttttct aaaatacttt tacaatctgt | 2580 |
| attataataa tctttaatcc aaatatattt attattttgt tcagtacaat atataatata | 2640 |
| attatcttct tcaaaacaac acatagaatt agataattta ttacacatta aaggattata | 2700 |
| atgtattcct ggaattaaaa tattttttatt acatctatga caataattac cagtaatatt | 2760 |
| tttatactca gatttgttta tgcaagtatt attatatcta acctcgttat tattacacga | 2820 |
| tttcataatt aaattattat ttatacaatc gtaatatata tcacagaaat acttactttg | 2880 |
| tttcggctca caacaaataa taaatgaagg tattaataat attaaccaaa acataactgt | 2940 |
| tatattatat ttttatttaa tatttcaatt ttaagtacaa tttcttatat tattttttaa | 3000 |
| catatatatt ctttcttcgt ctatttcatt tttatcatta taatattcta tatatggaaa | 3060 |
| tgtataagaa tttaatatata aatcatgttt ataaataaat atatgactta acatatgata | 3120 |
| catttcatac tttaatctac ttaaaaattt tgtttttaag ttaattatta ttttattatt | 3180 |
| ttttttatac ataaagccga aattattatt attataatta caatatatgt ctatgttata | 3240 |
| atttttttca ctattataaa acataatatt ataattttca tacattttta aactattttg | 3300 |
| tatttctctt gatctgatat tatcacaatt atttaattcta taataaacat taactatatt | 3360 |
| atcgtaatca ttacacattt catcaattat catcattttc atattatctt ttactccaca | 3420 |
| tctatcataa tctataatat ctgttatatt catattatat aaagaagtta ttctacttct | 3480 |

| | |
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<211> 501

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

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<222> (1)..(501)

<223>

<400> 28

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| 1 5 10 15 | |
| ata caa att tta tct att aat aaa aaa act tat gca aaa att aca act | 96 |
| Ile Gln Ile Leu Ser Ile Asn Lys Lys Thr Tyr Ala Lys Ile Thr Thr | |
| 20 25 30 | |
| ata gaa aat aat aga cct cat tgg gtg ttt gat tta tat ttt tat ata | 144 |
| Ile Glu Asn Asn Arg Pro His Trp Val Phe Asp Leu Tyr Phe Tyr Ile | |
| 35 40 45 | |
| aaa ata aca cgt ttt ttt aga aca ata tac gaa tat agt ata tat ggt | 192 |
| Lys Ile Thr Arg Phe Phe Arg Thr Ile Tyr Glu Tyr Ser Ile Tyr Gly | |
| 50 55 60 | |
| act gtt cca ata gaa aat aac gaa aga tat ata aga ata tat aat aat | 240 |
| Thr Val Pro Ile Glu Asn Asn Glu Arg Tyr Ile Arg Ile Tyr Asn Asn | |
| 65 70 75 80 | |
| act aca ttt aaa tta ttt cat gct gaa cca ctt ggg aga tta tta att | 288 |
| Thr Thr Phe Lys Leu Phe His Ala Glu Pro Leu Gly Arg Leu Leu Ile | |
| 85 90 95 | |
| tat gat aaa aat ggt gaa tta tta ttt cct att aac gtt ata tat att | 336 |
| Tyr Asp Lys Asn Gly Glu Leu Leu Phe Pro Ile Asn Val Ile Tyr Ile | |
| 100 105 110 | |
| tgg aat tta gat tct tta aaa ata gtt gat tat gct ata cta aca tta | 384 |
| Trp Asn Leu Asp Ser Leu Lys Ile Val Asp Tyr Ala Ile Leu Thr Leu | |
| 115 120 125 | |
| aat aat ata tat aat tta ttt ttg tat ttt gtt ata ttt ata atg ttt | 432 |
| Asn Asn Ile Tyr Asn Leu Phe Leu Tyr Phe Val Ile Phe Ile Met Phe | |
| 130 135 140 | |
| ata ata tat tat tta tat att tat ata aat aat agg aaa gat gtt ttg | 480 |
| Ile Ile Tyr Tyr Leu Tyr Ile Tyr Ile Asn Asn Arg Lys Asp Val Leu | |
| 145 150 155 160 | |
| aaa aaa aat aat ata cat taa | 501 |
| Lys Lys Asn Asn Ile His | |
| 165 | |

<210> 29

<211> 432

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (432)

<223>

<400> 29

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| atg gaa cca ata ttt aaa tat atg ttt gtt aca gaa aat gct ttt gaa | 48 |
| Met Glu Pro Ile Phe Lys Tyr Met Phe Val Thr Glu Asn Ala Phe Glu | |
| 1 5 10 15 | |
| cct att aga cag aca tca aaa tct gca gga atg gat tta aaa agt gca | 96 |
| Pro Ile Arg Gln Thr Ser Lys Ser Ala Gly Met Asp Leu Lys Ser Ala | |
| 20 25 30 | |
| tat gat tat att gtt tca gca cat gat aaa aaa tta ata aaa act gat | 144 |
| Tyr Asp Tyr Ile Val Ser Ala His Asp Lys Lys Leu Ile Lys Thr Asp | |
| 35 40 45 | |
| tta att ata gaa att cct aaa gga tgt tat gca aga tta gct ccc aga | 192 |
| Leu Ile Ile Glu Ile Pro Lys Gly Cys Tyr Ala Arg Leu Ala Pro Arg | |
| 50 55 60 | |
| tct gat tta gct cta aat aaa ttt att gat att gga gct gga gta att | 240 |
| Ser Asp Leu Ala Leu Asn Lys Phe Ile Asp Ile Gly Ala Gly Val Ile | |
| 65 70 75 80 | |
| gac gaa gat tat aga gga aat gtg gga gta ata tta ttt aat cat tct | 288 |
| Asp Glu Asp Tyr Arg Gly Asn Val Gly Val Ile Leu Phe Asn His Ser | |
| 85 90 95 | |
| aat gaa gat ttt ata ata aat aga gga gat aga ata tct caa tta ata | 336 |
| Asn Glu Asp Phe Ile Ile Asn Arg Gly Asp Arg Ile Ser Gln Leu Ile | |
| 100 105 110 | |
| tgt gaa aaa att tta tat cct aaa atg tta aaa gtc gat agt tta tca | 384 |
| Cys Glu Lys Ile Leu Tyr Pro Lys Met Leu Lys Val Asp Ser Leu Ser | |
| 115 120 125 | |
| gaa aca aaa aga tct gat ttt ggt ttt gga tct act ggt tat aat taa | 432 |
| Glu Thr Lys Arg Ser Asp Phe Gly Phe Gly Ser Thr Gly Tyr Asn | |
| 130 135 140 | |

<210> 30

<211> 780

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

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<222> (1) .. (780)

<223>

<400> 30

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| atg | ttt | aaa | aca | gat | tta | act | aat | gaa | gaa | gta | tca | gaa | gct | gct | aat | 48 |
| Met | Phe | Lys | Thr | Asp | Leu | Thr | Asn | Glu | Glu | Val | Ser | Glu | Ala | Ala | Asn | |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| aaa | tta | ata | aaa | aat | aat | act | tgt | aat | ttc | tat | gaa | tta | aaa | tta | gaa | 96 |
| Lys | Leu | Ile | Lys | Asn | Asn | Thr | Cys | Asn | Phe | Tyr | Glu | Leu | Lys | Leu | Glu | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| aat | att | tta | gac | aat | att | gat | tta | aca | aat | aat | tgt | ata | tat | tgt | aat | 144 |
| Asn | Ile | Leu | Asp | Asn | Ile | Asp | Leu | Thr | Asn | Asn | Cys | Ile | Tyr | Cys | Asn | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| gat | gta | att | aaa | gat | aaa | att | att | ata | gat | aca | aac | aat | ata | aaa | gtg | 192 |
| Asp | Val | Ile | Lys | Asp | Lys | Ile | Ile | Ile | Asp | Thr | Asn | Asn | Ile | Lys | Val | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| gga | tat | ttt | tgt | aca | ata | aca | tgc | aaa | cac | ata | tat | tat | tca | ata | ata | 240 |
| Gly | Tyr | Phe | Cys | Thr | Ile | Thr | Cys | Lys | His | Ile | Tyr | Tyr | Ser | Ile | Ile | |
| 65 | | | | 70 | | | | | 75 | | | | | 80 | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| aga | aca | att | ttc | aat | tta | ccc | att | cat | aaa | att | att | aat | ttt | ata | cca | 288 |
| Arg | Thr | Ile | Phe | Asn | Leu | Pro | Ile | His | Lys | Ile | Ile | Asn | Phe | Ile | Pro | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| ttt | ttt | tta | tta | tcc | gaa | gaa | tct | aaa | att | aaa | tat | aaa | aat | ata | aaa | 336 |
| Phe | Phe | Leu | Leu | Ser | Glu | Glu | Ser | Lys | Ile | Lys | Tyr | Lys | Asn | Ile | Lys | |
| | | 100 | | | | | | 105 | | | | | 110 | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| aat | att | att | aat | tat | tat | aat | tat | gat | gat | ata | tct | att | ttt | agt | aaa | 384 |
| Asn | Ile | Ile | Asn | Tyr | Tyr | Asn | Tyr | Asp | Asp | Ile | Ser | Ile | Phe | Ser | Lys | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| tat | aaa | gat | aat | aat | aat | ata | tat | act | gaa | ttt | aaa | tta | tta | att | aat | 432 |
| Tyr | Lys | Asp | Asn | Asn | Asn | Ile | Tyr | Thr | Glu | Phe | Lys | Leu | Leu | Ile | Asn | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |

| | |
|---|-----|
| aat aaa ttt att tat ctc caa gaa tcg ttt gaa tat ata tca aaa agt | 480 |
| Asn Lys Phe Ile Tyr Leu Gln Glu Ser Phe Glu Tyr Ile Ser Lys Ser | |
| 145 150 155 160 | |
| | |
| aat aat tgt ata tat tgt tat tct act aat ata aat gat aaa ata ata | 528 |
| Asn Asn Cys Ile Tyr Cys Tyr Ser Thr Asn Ile Asn Asp Lys Ile Ile | |
| 165 170 175 | |
| | |
| tta gag cat aat aat gga att att aaa ggt ttt tgt tct ata gtt tgt | 576 |
| Leu Glu His Asn Asn Gly Ile Ile Lys Gly Phe Cys Ser Ile Val Cys | |
| 180 185 190 | |
| | |
| aga gat tcg ata tct aaa caa ata tat aat aca att atg cct att tat | 624 |
| Arg Asp Ser Ile Ser Lys Gln Ile Tyr Asn Thr Ile Met Pro Ile Tyr | |
| 195 200 205 | |
| | |
| aaa ttt agt gca tat ttg gta cca ttt gaa tta ata aaa aat aaa aaa | 672 |
| Lys Phe Ser Ala Tyr Leu Val Pro Phe Glu Leu Ile Lys Asn Lys Lys | |
| 210 215 220 | |
| | |
| gaa ttt tta aat aat att aat cat ata aaa aat att gat aat tta tat | 720 |
| Glu Phe Leu Asn Asn Ile Asn His Ile Lys Asn Ile Asp Asn Leu Tyr | |
| 225 230 235 240 | |
| | |
| ggt ggt tat tgt cat tta act aat aat aaa act aaa gta gaa tta ttt | 768 |
| Gly Gly Tyr Cys His Leu Thr Asn Asn Lys Thr Lys Val Glu Leu Phe | |
| 245 250 255 | |
| | |
| att aca aat taa | 780 |
| Ile Thr Asn | |

<210> 31

<211> 1050

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1)..(1050)

<223>

<400> 31

| | |
|---|----|
| atg gtt ttc gaa cat aag ata ttt tca tat aat ttt act gat att aaa | 48 |
| Met Val Phe Glu His Lys Ile Phe Ser Tyr Asn Phe Thr Asp Ile Lys | |

| 1 | 5 | 10 | 15 | |
|---|---|-----|-----|-----|
| aaa aaa aaa ata tat cca ata tgc aat tgt att att aat att ttt gat | | | | 96 |
| Lys Lys Lys Ile Tyr Pro Ile Cys Asn Cys Ile Ile Asn Ile Phe Asp | | | | |
| 20 | | 25 | 30 | |
| aaa gaa att aaa ata cca act tta act aaa gca ata ata gac acc aaa | | | | 144 |
| Lys Glu Ile Lys Ile Pro Thr Leu Thr Lys Ala Ile Ile Asp Thr Lys | | | | |
| 35 | | 40 | 45 | |
| cat aat tta gga cct ata tat cta aat ata gct aat atg ctg gcg tat | | | | 192 |
| His Asn Leu Gly Pro Ile Tyr Leu Asn Ile Ala Asn Met Leu Ala Tyr | | | | |
| 50 | | 55 | 60 | |
| gtt gat ata ata tat tta ttt aat aat aat tta gat gaa ata aat aat | | | | 240 |
| Val Asp Ile Ile Tyr Leu Phe Asn Asn Asn Leu Asp Glu Ile Asn Asn | | | | |
| 65 | | 70 | 75 | 80 |
| tgt ggt ata tac tta ccg att att gac gat ggt agc aaa cat ttt tta | | | | 288 |
| Cys Gly Ile Tyr Leu Pro Ile Ile Asp Asp Gly Ser Lys His Phe Leu | | | | |
| 85 | | 90 | 95 | |
| act tat aaa gat ata aaa tta ttt ata ttt gat gac gaa act ggt aaa | | | | 336 |
| Thr Tyr Lys Asp Ile Lys Leu Phe Ile Phe Asp Asp Glu Thr Gly Lys | | | | |
| 100 | | 105 | 110 | |
| ata aaa att att gat aat cct aaa cat tct gat aaa cat cat ata ata | | | | 384 |
| Ile Lys Ile Ile Asp Asn Pro Lys His Ser Asp Lys His His Ile Ile | | | | |
| 115 | | 120 | 125 | |
| aat tta tct aaa gaa cgt aaa aca gat gat gct ata ggt tca tca cac | | | | 432 |
| Asn Leu Ser Lys Glu Arg Lys Thr Asp Asp Ala Ile Gly Ser Ser His | | | | |
| 130 | | 135 | 140 | |
| gtt tta tta ttt tca tgt aat tca aaa att gaa gaa aat atc aat ttg | | | | 480 |
| Val Leu Leu Phe Ser Cys Asn Ser Lys Ile Glu Glu Asn Ile Asn Leu | | | | |
| 145 | | 150 | 155 | 160 |
| cat aaa aat att tta tta aca ttt aaa gat tat cct gtg aaa gtt gat | | | | 528 |
| His Lys Asn Ile Leu Leu Thr Phe Lys Asp Tyr Pro Val Lys Val Asp | | | | |
| 165 | | 170 | 175 | |
| ata aaa aat gaa ata gaa aat tct aaa cat tat tat gaa aaa aat tta | | | | 576 |
| Ile Lys Asn Glu Ile Glu Asn Ser Lys His Tyr Tyr Glu Lys Asn Leu | | | | |
| 180 | | 185 | 190 | |
| tta tat aaa aaa cca ttt tct atg tat agc aaa tat cat gaa gaa aaa | | | | 624 |
| Leu Tyr Lys Lys Pro Phe Ser Met Tyr Ser Lys Tyr His Glu Glu Lys | | | | |
| 195 | | 200 | 205 | |
| gat att tat act ata gat ata aga tat aat cat tat gat gat att cct | | | | 672 |
| Asp Ile Tyr Thr Ile Asp Ile Arg Tyr Asn His Tyr Asp Asp Ile Pro | | | | |
| 210 | | 215 | 220 | |
| aaa gaa aat ata aaa aaa ttc ttt att gat ata ttt aat aaa ata gca | | | | 720 |
| Lys Glu Asn Ile Lys Lys Phe Phe Ile Asp Ile Phe Asn Lys Ile Ala | | | | |
| 225 | | 230 | 235 | 240 |

gat ata ttt gaa aat att aaa att aaa aaa aat aat gtt gat tat agt 768
 Asp Ile Phe Glu Asn Ile Lys Ile Lys Lys Asn Asn Val Asp Tyr Ser
 245 250 255

aat aaa ata agt tat tct aat ata tta gat cat aaa atg aat tat aaa 816
 Asn Lys Ile Ser Tyr Ser Asn Ile Leu Asp His Lys Met Asn Tyr Lys
 260 265 270

tat att aac gta gat gat att ata gaa aag aat aaa atg gat gca ttg 864
 Tyr Ile Asn Val Asp Asp Ile Ile Glu Lys Asn Lys Met Asp Ala Leu
 275 280 285

tgt tct ata aat gat ata cct gga ata aat gga aca tat tta aaa cca 912
 Cys Ser Ile Asn Asp Ile Pro Gly Ile Asn Gly Thr Tyr Leu Lys Pro
 290 295 300

tca gat gaa gag att aat gac gca gaa tat tca tta aat act att atg 960
 Ser Asp Glu Glu Ile Asn Asp Ala Glu Tyr Ser Leu Asn Thr Ile Met
 305 310 315 320

aga aat aca ata aaa gaa tta tta gaa tct ttt ata aat ttt att gat 1008
 Arg Asn Thr Ile Lys Glu Leu Leu Glu Ser Phe Ile Asn Phe Ile Asp
 325 330 335

gaa aca tac gaa gaa cgt tta aat agt aaa aat ata tat taa 1050
 Glu Thr Tyr Glu Glu Arg Leu Asn Ser Lys Asn Ile Tyr
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<213> Amsacta moorei entomopoxvirus

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 Met Asp Gln Ile Glu Ile Ile Lys Thr Ile Asn Ser Met Ile Glu Tyr
 1 5 10 15

ata aaa aat acc aaa gat aag tta tct ata gat aat ttt ata ttc gaa 96
 Ile Lys Asn Thr Lys Asp Lys Leu Ser Ile Asp Asn Phe Ile Phe Glu

| 20 | 25 | 30 | |
|---|-----|-----|-----|
| cat aaa gat tta tat gat aat gta gtt att tat tca aaa tat tta tca | | | 144 |
| His Lys Asp Leu Tyr Asp Asn Val Val Ile Tyr Ser Lys Tyr Leu Ser | | | |
| 35 | 40 | 45 | |
| gat aaa gat ttt aaa ttt tta tac gtt att gta gaa aaa tat cca gac | | | 192 |
| Asp Lys Asp Phe Lys Phe Leu Tyr Val Ile Val Glu Lys Tyr Pro Asp | | | |
| 50 | 55 | 60 | |
| gca aat cca aat ata ata tat aat ata ttt aaa aca tca cag ata tct | | | 240 |
| Ala Asn Pro Asn Ile Ile Tyr Asn Ile Phe Lys Thr Ser Gln Ile Ser | | | |
| 65 | 70 | 75 | 80 |
| ata acg caa gat att aat ata aat aaa ata ata cag aat aaa gat aat | | | 288 |
| Ile Thr Gln Asp Ile Asn Ile Asn Lys Ile Ile Gln Asn Lys Asp Asn | | | |
| 85 | 90 | 95 | |
| aca aaa ata aac caa gat ata cac aca tat aat tat ttg tta tta tta | | | 336 |
| Thr Lys Ile Asn Gln Asp Ile His Thr Tyr Asn Tyr Leu Leu Leu Leu | | | |
| 100 | 105 | 110 | |
| aat aaa tta tat ata ttt caa cca ata cca aaa ttt ata aat ata tta | | | 384 |
| Asn Lys Leu Tyr Ile Phe Gln Pro Ile Pro Lys Phe Ile Asn Ile Leu | | | |
| 115 | 120 | 125 | |
| tgg gat ata aaa tca aaa aat gta gat aat cta gac aaa ata aat aat | | | 432 |
| Trp Asp Ile Lys Ser Lys Asn Val Asp Asn Leu Asp Lys Ile Asn Asn | | | |
| 130 | 135 | 140 | |
| ata aat aca aat tcg tta aat ata att aca aat ata gaa atg tca aaa | | | 480 |
| Ile Asn Thr Asn Ser Leu Asn Ile Ile Thr Asn Ile Glu Met Ser Lys | | | |
| 145 | 150 | 155 | 160 |
| gtt aat att att tat ata tca ttt aca tat att tca tct tat ata gaa | | | 528 |
| Val Asn Ile Ile Tyr Ile Ser Phe Thr Tyr Ile Ser Ser Tyr Ile Glu | | | |
| 165 | 170 | 175 | |
| tca cat aaa agt gaa ctt acg tta aat aaa aaa ttt tct att tat gat | | | 576 |
| Ser His Lys Ser Glu Leu Thr Leu Asn Lys Lys Phe Ser Ile Tyr Asp | | | |
| 180 | 185 | 190 | |
| aat tta aga aga ata att ggc gtt cct ata tct aat aat aac tat aaa | | | 624 |
| Asn Leu Arg Arg Ile Ile Gly Val Pro Ile Ser Asn Asn Asn Tyr Lys | | | |
| 195 | 200 | 205 | |
| tta aat tat tat att aaa gct aaa ata gat tca gaa aca tta ata tat | | | 672 |
| Leu Asn Tyr Tyr Ile Lys Ala Lys Ile Asp Ser Glu Thr Leu Ile Tyr | | | |
| 210 | 215 | 220 | |
| aat ata ttt aat tct gta gct ttt aaa aaa gta ata ata tat gga ttt | | | 720 |
| Asn Ile Phe Asn Ser Val Ala Phe Lys Lys Val Ile Ile Tyr Gly Phe | | | |
| 225 | 230 | 235 | 240 |
| gga gtt tat caa ata aaa gat gta aaa aat ata ata aaa gat acg att | | | 768 |
| Gly Val Tyr Gln Ile Lys Asp Val Lys Asn Ile Ile Lys Asp Thr Ile | | | |
| 245 | 250 | 255 | |

| | |
|---|------|
| aat gat gtt tcg tca tac ata gtt aat aat aat aaa gaa aaa ttg tat | 816 |
| Asn Asp Val Ser Ser Tyr Ile Val Asn Asn Asn Lys Glu Lys Leu Tyr | |
| 260 265 270 | |
| caa cgt aca tac tgt tgt tgt tat ttt tta aac tgt tat tat gaa aaa | 864 |
| Gln Arg Thr Tyr Cys Cys Cys Tyr Phe Leu Asn Cys Tyr Tyr Glu Lys | |
| 275 280 285 | |
| att ttt aaa aat tta tcc aca caa aca tat gat aaa ata tta tat tca | 912 |
| Ile Phe Lys Asn Leu Ser Thr Gln Thr Tyr Asp Lys Ile Leu Tyr Ser | |
| 290 295 300 | |
| aat gta gtt aat att aat gat gtt att cat aaa aaa tat gaa tat ttc | 960 |
| Asn Val Val Asn Ile Asn Asp Val Ile His Lys Lys Tyr Glu Tyr Phe | |
| 305 310 315 320 | |
| gaa tgt caa cat gta caa gaa tat aaa aat gtt ttt aaa aat gta gaa | 1008 |
| Glu Cys Gln His Val Gln Glu Tyr Lys Asn Val Phe Lys Asn Val Glu | |
| 325 330 335 | |
| aat ttt tat att aat act aat aaa ttt cta gaa aat tat att aat att | 1056 |
| Asn Phe Tyr Ile Asn Thr Asn Lys Phe Leu Glu Asn Tyr Ile Asn Ile | |
| 340 345 350 | |
| gtt aat aaa gta gct ata tgt aaa att tgt gga gaa tcg tta gat atg | 1104 |
| Val Asn Lys Val Ala Ile Cys Lys Ile Cys Gly Glu Ser Leu Asp Met | |
| 355 360 365 | |
| ttt aat ttt gaa gaa gca aat tat att caa tct aaa ggc gaa att ata | 1152 |
| Phe Asn Phe Glu Glu Ala Asn Tyr Ile Gln Ser Lys Gly Glu Ile Ile | |
| 370 375 380 | |
| ata aca aca aat aaa gaa aat att ttc caa tat gaa act tat tca aga | 1200 |
| Ile Thr Thr Asn Lys Glu Asn Ile Phe Gln Tyr Glu Thr Tyr Ser Arg | |
| 385 390 395 400 | |
| tta gtt aat gct gaa tta ttt tta aca gat att ata gga att tat gat | 1248 |
| Leu Val Asn Ala Glu Leu Phe Leu Thr Asp Ile Ile Gly Ile Tyr Asp | |
| 405 410 415 | |
| gat att ttt aac aca aac aga atg gac gat ttt aat aat ata tct aga | 1296 |
| Asp Ile Phe Asn Thr Asn Arg Met Asp Asp Phe Asn Asn Ile Ser Arg | |
| 420 425 430 | |
| ata att att gat ttt ttt att gat att aac aca aat aga tta gaa tat | 1344 |
| Ile Ile Ile Asp Phe Phe Ile Asp Ile Asn Thr Asn Arg Leu Glu Tyr | |
| 435 440 445 | |
| caa gat aaa tat aaa aaa caa atc tct aac tcc aaa tta ttt ttt ata | 1392 |
| Gln Asp Lys Tyr Lys Lys Gln Ile Ser Asn Ser Lys Leu Phe Phe Ile | |
| 450 455 460 | |
| aga ttg tca aat aat tta ttt ata gca gtt tat aat gaa aaa gaa caa | 1440 |
| Arg Leu Ser Asn Asn Leu Phe Ile Ala Val Tyr Asn Glu Lys Glu Gln | |
| 465 470 475 480 | |

| | |
|---|------|
| tat gcc gaa gaa aga caa cta aac atg ttt ata ata ttc gga ata tct | 1488 |
| Tyr Ala Glu Glu Arg Gln Leu Asn Met Phe Ile Ile Phe Gly Ile Ser | |
| 485 490 495 | |
| tta tta tta tta agt aat ttt aat gaa tta ata ggt ata ata aaa aat | 1536 |
| Leu Leu Leu Leu Ser Asn Phe Asn Glu Leu Ile Gly Ile Ile Lys Asn | |
| 500 505 510 | |
| aat aaa aaa tta aaa act ata ttt gat aat caa aat gat att aaa ata | 1584 |
| Asn Lys Lys Leu Lys Thr Ile Phe Asp Asn Gln Asn Asp Ile Lys Ile | |
| 515 520 525 | |
| aat tta gat aat ttt ata aaa gat act gta ttc ata tat ata agt agg | 1632 |
| Asn Leu Asp Asn Phe Ile Lys Asp Thr Val Phe Ile Tyr Ile Ser Arg | |
| 530 535 540 | |
| aat aga tta ata gat aaa aaa agt aga gaa ttg att aat tat gat act | 1680 |
| Asn Arg Leu Ile Asp Lys Lys Ser Arg Glu Leu Ile Asn Tyr Asp Thr | |
| 545 550 555 560 | |
| ata att gat gtt tat tta aat ata tta act ccc gaa tta aaa tcg tgt | 1728 |
| Ile Ile Asp Val Tyr Leu Asn Ile Leu Thr Pro Glu Leu Lys Ser Cys | |
| 565 570 575 | |
| tat aat ata ata tta aat aga tta tat aaa aat ata gat att tta aaa | 1776 |
| Tyr Asn Ile Ile Leu Asn Arg Leu Tyr Lys Asn Ile Asp Ile Leu Lys | |
| 580 585 590 | |
| tat gat tat ata gaa tta cca gat att cca tta cta ccc gta aca tta | 1824 |
| Tyr Asp Tyr Ile Glu Leu Pro Asp Ile Pro Leu Leu Pro Val Thr Leu | |
| 595 600 605 | |
| gga tat aaa cac aaa aat att gat act ggt cct aca ata tct ttt tta | 1872 |
| Gly Tyr Lys His Lys Asn Ile Asp Thr Gly Pro Thr Ile Ser Phe Leu | |
| 610 615 620 | |
| cca ctc gaa gat gta att aat tat aat aat gta aat att tat gaa agt | 1920 |
| Pro Leu Glu Asp Val Ile Asn Tyr Asn Asn Val Asn Ile Tyr Glu Ser | |
| 625 630 635 640 | |
| aat att aga tat att aca tac gat acg tta aaa att aaa aat tta tct | 1968 |
| Asn Ile Arg Tyr Ile Thr Tyr Asp Thr Leu Lys Ile Lys Asn Leu Ser | |
| 645 650 655 | |
| gat ttt gat att aaa gat ata aat gtt gaa tta aaa act ata att gaa | 2016 |
| Asp Phe Asp Ile Lys Asp Ile Asn Val Glu Leu Lys Thr Ile Ile Glu | |
| 660 665 670 | |
| aga ttt aat tct gaa tat tac tat aga aat att agt ata tta aac ttt | 2064 |
| Arg Phe Asn Ser Glu Tyr Tyr Tyr Arg Asn Ile Ser Ile Leu Asn Phe | |
| 675 680 685 | |
| gaa cag atg gat aat tat aat ttt tat ata gat ata gga caa aaa tat | 2112 |
| Glu Gln Met Asp Asn Tyr Asn Phe Tyr Ile Asp Ile Gly Gln Lys Tyr | |
| 690 695 700 | |
| ttt ttt tat ata aat gat gta tta tcg aat agt aat att gta ata aaa | 2160 |

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Phe Phe Tyr Ile Asn Asp Val Leu Ser Asn Ser Asn Ile Val Ile Lys
705                710                715                720

agt aat att tat tct aaa ata atg aat ttt ggt gat tct ttg cca ttt      2208
Ser Asn Ile Tyr Ser Lys Ile Met Asn Phe Gly Asp Ser Leu Pro Phe
              725                730                735

tta aat aaa ata tat aaa ttt cat tat aca tta tta ttt gat aat ctg      2256
Leu Asn Lys Ile Tyr Lys Phe His Tyr Thr Leu Leu Phe Asp Asn Leu
              740                745                750

aat tta tta ata aat ttt tta tat ccg aat gtt aaa att ata ttt aat      2304
Asn Leu Leu Ile Asn Phe Leu Tyr Pro Asn Val Lys Ile Ile Phe Asn
              755                760                765

tat gat caa gat tat ata act aga gat tat ttt cat tat att gtt tat      2352
Tyr Asp Gln Asp Tyr Ile Thr Arg Asp Tyr Phe His Tyr Ile Val Tyr
              770                775                780

aat ata tta att tca tta att aat act aat ata tta tca tgg ata gat      2400
Asn Ile Leu Ile Ser Leu Ile Asn Thr Asn Ile Leu Ser Trp Ile Asp
785                790                795                800

gta aac aaa gat ata ata tct aaa tta tat gat aat act tta aga ttt      2448
Val Asn Lys Asp Ile Ile Ser Lys Leu Tyr Asp Asn Thr Leu Arg Phe
              805                810                815

tat gtt aaa aat ata tat taa      2469
Tyr Val Lys Asn Ile Tyr
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<210> 33

<211> 1410

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

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<223>

<400> 33

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atg gtt aaa tat att aaa tta aat aaa aaa ata ttt aat tat ata aaa      48
Met Val Lys Tyr Ile Lys Leu Asn Lys Lys Ile Phe Asn Tyr Ile Lys
1                5                10                15

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| | |
|---|-----|
| tca aga tta aaa tca caa gaa ata tta ata tat gat aaa aat tct aat | 96 |
| Ser Arg Leu Lys Ser Gln Glu Ile Leu Ile Tyr Asp Lys Asn Ser Asn | |
| 20 25 30 | |
| cat gct ata att aca aat gat atg ata gaa aat att gat tta gat ata | 144 |
| His Ala Ile Ile Thr Asn Asp Met Ile Glu Asn Ile Asp Leu Asp Ile | |
| 35 40 45 | |
| ata tgt ccg ttg att ttg tat aac gaa aat gat aaa att att gac aaa | 192 |
| Ile Cys Pro Leu Ile Leu Tyr Asn Glu Asn Asp Lys Ile Ile Asp Lys | |
| 50 55 60 | |
| att aat aat atg gat aaa ttt att gag tgt aaa tat caa tta agg gaa | 240 |
| Ile Asn Asn Met Asp Lys Phe Ile Glu Cys Lys Tyr Gln Leu Arg Glu | |
| 65 70 75 80 | |
| gat caa tta gag tta att aat aat ata atg aat att aat aat aat tat | 288 |
| Asp Gln Leu Glu Leu Ile Asn Asn Ile Met Asn Ile Asn Asn Asn Tyr | |
| 85 90 95 | |
| tct tgt aat tca ccc ata tat tta tca tta gta tgt cct tgt gga tat | 336 |
| Ser Cys Asn Ser Pro Ile Tyr Leu Ser Leu Val Cys Pro Cys Gly Tyr | |
| 100 105 110 | |
| ggc aaa act ata ttg ggc ata gat ata ata tct aga tta aaa tac aaa | 384 |
| Gly Lys Thr Ile Leu Gly Ile Asp Ile Ile Ser Arg Leu Lys Tyr Lys | |
| 115 120 125 | |
| tgt gct ata att gta cct aga att ttt att ata tat caa tgg tta gat | 432 |
| Cys Ala Ile Ile Val Pro Arg Ile Phe Ile Ile Tyr Gln Trp Leu Asp | |
| 130 135 140 | |
| aaa ata aaa caa aaa aat aat ata ttt gca tct acg tgt ggt aga aaa | 480 |
| Lys Ile Lys Gln Lys Asn Asn Ile Phe Ala Ser Thr Cys Gly Arg Lys | |
| 145 150 155 160 | |
| aaa gcg att gaa caa ata aaa aat ggt tta gag tgt gat gtg ttt ata | 528 |
| Lys Ala Ile Glu Gln Ile Lys Asn Gly Leu Glu Cys Asp Val Phe Ile | |
| 165 170 175 | |
| tgt cct gat aaa cat tta gaa aat gat att att aga aat tat ata tat | 576 |
| Cys Pro Asp Lys His Leu Glu Asn Asp Ile Ile Arg Asn Tyr Ile Tyr | |
| 180 185 190 | |
| aat acg tgt agt tta gta att gtt gat gaa gct cat cga tat aat gct | 624 |
| Asn Thr Cys Ser Leu Val Ile Val Asp Glu Ala His Arg Tyr Asn Ala | |
| 195 200 205 | |
| aat aaa aat ata gta atg act aga ttt tta tat aat aaa ata ttt aaa | 672 |
| Asn Lys Asn Ile Val Met Thr Arg Phe Leu Tyr Asn Lys Ile Phe Lys | |
| 210 215 220 | |
| ttt tgt ttg ttt tta act gct acg cca tct aat aat atg aat act ttt | 720 |
| Phe Cys Leu Phe Leu Thr Ala Thr Pro Ser Asn Asn Met Asn Thr Phe | |
| 225 230 235 240 | |
| ata aat gaa ttt att gat att aat aat caa tca cag att aaa ata tta | 768 |

| | |
|---|------|
| Ile Asn Glu Phe Ile Asp Ile Asn Asn Gln Ser Gln Ile Lys Ile Leu | |
| 245 250 255 | |
| aat gat att aaa aaa aaa tta att ata ttt aat ttg aaa gat aaa ata | 816 |
| Asn Asp Ile Lys Lys Lys Leu Ile Ile Phe Asn Leu Lys Asp Lys Ile | |
| 260 265 270 | |
| ttt act cca att aat aat aat tgt aaa tat tat gtt aat aaa ata aca | 864 |
| Phe Thr Pro Ile Asn Asn Asn Cys Lys Tyr Tyr Val Asn Lys Ile Thr | |
| 275 280 285 | |
| aat aat aaa ttc aat aat ata tat ata aaa aat ttt aat tac aaa tat | 912 |
| Asn Asn Lys Phe Asn Asn Ile Tyr Ile Lys Asn Phe Asn Tyr Lys Tyr | |
| 290 295 300 | |
| tgt att tct ctt gat gat aaa aga aat gaa att att ata gat tta ata | 960 |
| Cys Ile Ser Leu Asp Asp Lys Arg Asn Glu Ile Ile Ile Asp Leu Ile | |
| 305 310 315 320 | |
| tta aaa aca act acg gat aat aca aaa tgt tta att ttg aca gat tat | 1008 |
| Leu Lys Thr Thr Thr Asp Asn Thr Lys Cys Leu Ile Leu Thr Asp Tyr | |
| 325 330 335 | |
| aga tta cac atg atg aat ata tat aat tta tta aaa aaa aca cac tta | 1056 |
| Arg Leu His Met Met Asn Ile Tyr Asn Leu Leu Lys Lys Thr His Leu | |
| 340 345 350 | |
| caa aat ata att tat ata tat gat gta aaa aat aaa aaa tgt aat gat | 1104 |
| Gln Asn Ile Ile Tyr Ile Tyr Asp Val Lys Asn Lys Lys Cys Asn Asp | |
| 355 360 365 | |
| ttg tta aca gaa att aaa aat aag aat gaa aaa ttt att att ata tca | 1152 |
| Leu Leu Thr Glu Ile Lys Asn Lys Asn Glu Lys Phe Ile Ile Ile Ser | |
| 370 375 380 | |
| act ata tct gct tgt tct gaa tca tta gat att aat aat tta aat act | 1200 |
| Thr Ile Ser Ala Cys Ser Glu Ser Leu Asp Ile Asn Asn Leu Asn Thr | |
| 385 390 395 400 | |
| ttt cat gtt tta tta cct att act aat tct aaa aca ata aaa caa tgc | 1248 |
| Phe His Val Leu Leu Pro Ile Thr Asn Ser Lys Thr Ile Lys Gln Cys | |
| 405 410 415 | |
| ata ggt aga att atg aga aat atg aac gaa gat aaa tat act tat ata | 1296 |
| Ile Gly Arg Ile Met Arg Asn Met Asn Glu Asp Lys Tyr Thr Tyr Ile | |
| 420 425 430 | |
| tat aat ttt tct aac atc aat aac atg att aat atg tat att aat gat | 1344 |
| Tyr Asn Phe Ser Asn Ile Asn Asn Met Ile Asn Met Tyr Ile Asn Asp | |
| 435 440 445 | |
| aaa act gat tta ata aga aaa gta ttg tct gat tgg gaa tgt gta gaa | 1392 |
| Lys Thr Asp Leu Ile Arg Lys Val Leu Ser Asp Trp Glu Cys Val Glu | |
| 450 455 460 | |
| ata aaa tgt tca tat taa | 1410 |
| Ile Lys Cys Ser Tyr | |

465

<210> 34

<211> 768

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1)..(768)

<223>

<400> 34

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| atg | tat | tgt | aac | cca | ata | gca | ttt | ata | tct | gat | ttt | gat | aat | tca | tac | 48 |
| Met | Tyr | Cys | Asn | Pro | Ile | Ala | Phe | Ile | Ser | Asp | Phe | Asp | Asn | Ser | Tyr | |
| 1 | | | 5 | | | | | 10 | | | | | 15 | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| gct | ggt | aga | gtt | aga | tac | ata | gat | aat | ttt | ata | gct | gga | gct | aca | aat | 96 |
| Ala | Gly | Arg | Val | Arg | Tyr | Ile | Asp | Asn | Phe | Ile | Ala | Gly | Ala | Thr | Asn | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| att | cca | gat | aat | aaa | act | att | ttt | aaa | ata | att | gga | gga | aaa | ggt | gtt | 144 |
| Ile | Pro | Asp | Asn | Lys | Thr | Ile | Phe | Lys | Ile | Ile | Gly | Gly | Lys | Gly | Val | |
| | | | 35 | | | | | 40 | | | | | 45 | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| ttt | tta | aaa | act | aat | agt | caa | tat | aac | act | ata | cca | tat | aca | tca | cct | 192 |
| Phe | Leu | Lys | Thr | Asn | Ser | Gln | Tyr | Asn | Thr | Ile | Pro | Tyr | Thr | Ser | Pro | |
| | 50 | | | | | | 55 | | | | 60 | | | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| act | aaa | aaa | aaa | aat | aat | tac | tta | gtc | tat | aat | ata | tat | gat | ttg | cga | 240 |
| Thr | Lys | Lys | Lys | Asn | Asn | Tyr | Leu | Val | Tyr | Asn | Ile | Tyr | Asp | Leu | Arg | |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| gat | tat | att | agt | gaa | aat | tca | aaa | ttc | tcg | ata | aat | gat | ttt | atg | aat | 288 |
| Asp | Tyr | Ile | Ser | Glu | Asn | Ser | Lys | Phe | Ser | Ile | Asn | Asp | Phe | Met | Asn | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| aat | att | aat | aat | tcg | tca | caa | aat | aat | aga | att | atg | gtt | ctg | agt | ggt | 336 |
| Asn | Ile | Asn | Asn | Ser | Ser | Gln | Asn | Asn | Arg | Ile | Met | Val | Leu | Ser | Gly | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| gat | aca | aaa | tat | aaa | ata | aga | aat | cct | aat | aga | tta | ata | ttt | tct | gat | 384 |
| Asp | Thr | Lys | Tyr | Lys | Ile | Arg | Asn | Pro | Asn | Arg | Leu | Ile | Phe | Ser | Asp | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| aca | tct | tat | cct | att | tta | gtt | act | tat | aat | tta | aat | gat | aaa | att | aat | 432 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Thr | Ser | Tyr | Pro | Ile | Leu | Val | Thr | Tyr | Asn | Leu | Asn | Asp | Lys | Ile | Asn | | |
| 130 | | | | | | 135 | | | | | 140 | | | | | | |
| ata | tct | atc | gaa | aac | cca | aat | gaa | aaa | gta | gaa | aaa | tat | gaa | ata | ccc | 480 | |
| Ile | Ser | Ile | Glu | Asn | Pro | Asn | Glu | Lys | Val | Glu | Lys | Tyr | Glu | Ile | Pro | | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | | |
| gaa | gat | gtt | tgc | tat | gtc | tat | aaa | caa | aaa | gat | aca | tat | gta | atg | tcg | 528 | |
| Glu | Asp | Val | Cys | Tyr | Val | Tyr | Lys | Gln | Lys | Asp | Thr | Tyr | Val | Met | Ser | | |
| | | | | 165 | | | | | 170 | | | | | 175 | | | |
| gtt | aat | gtt | aaa | cgt | ttg | acg | cca | gta | gat | ata | tat | tat | att | act | acc | 576 | |
| Val | Asn | Val | Lys | Arg | Leu | Thr | Pro | Val | Asp | Ile | Tyr | Tyr | Ile | Thr | Thr | | |
| | | | 180 | | | | 185 | | | | | | 190 | | | | |
| gaa | gtt | gat | caa | aat | aat | tca | aat | aat | ata | aaa | tct | ata | aaa | ata | gaa | 624 | |
| Glu | Val | Asp | Gln | Asn | Asn | Ser | Asn | Asn | Ile | Lys | Ser | Ile | Lys | Ile | Glu | | |
| | | 195 | | | | | 200 | | | | | 205 | | | | | |
| gat | aca | tca | gaa | cct | tta | gaa | ata | cac | cca | tct | tat | aga | aaa | ata | tta | 672 | |
| Asp | Thr | Ser | Glu | Pro | Leu | Glu | Ile | His | Pro | Ser | Tyr | Arg | Lys | Ile | Leu | | |
| | 210 | | | | | 215 | | | | | 220 | | | | | | |
| gta | aca | aaa | tta | gtg | gat | ttt | att | aat | caa | aat | ata | aaa | cca | act | aat | 720 | |
| Val | Thr | Lys | Leu | Val | Asp | Phe | Ile | Asn | Gln | Asn | Ile | Lys | Pro | Thr | Asn | | |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 | | |
| ttt | aat | ttt | tca | gaa | tat | ttt | gat | aag | tat | ata | aat | act | act | aaa | taa | 768 | |
| Phe | Asn | Phe | Ser | Glu | Tyr | Phe | Asp | Lys | Tyr | Ile | Asn | Thr | Thr | Lys | | | |
| | | | | 245 | | | | | 250 | | | | | 255 | | | |

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<221> exon

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<223>

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| atg | aat | aat | aat | ccg | att | gaa | gaa | gat | att | gca | aat | tta | ttt | ttg | caa | 48 | |
| Met | Asn | Asn | Asn | Pro | Ile | Glu | Glu | Asp | Ile | Ala | Asn | Leu | Phe | Leu | Gln | | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | | |

| | |
|---|-----|
| tgc gat cct aga ttg gat ata aaa tct aaa gtt ttg att aat gta gaa | 96 |
| Cys Asp Pro Arg Leu Asp Ile Lys Ser Lys Val Leu Ile Asn Val Glu | |
| 20 25 30 | |
| tta cca ttt aaa aat tta aat tat gat ttg cct acg tta ttt aat aga | 144 |
| Leu Pro Phe Lys Asn Leu Asn Tyr Asp Leu Pro Thr Leu Phe Asn Arg | |
| 35 40 45 | |
| gaa gaa gtt ata tat aca aag ata agt aaa tca gga cat gaa gat gtc | 192 |
| Glu Glu Val Ile Tyr Thr Lys Ile Ser Lys Ser Gly His Glu Asp Val | |
| 50 55 60 | |
| ata atg aaa ata aca tac gaa ggt aaa gaa gat aat aaa aaa agt tat | 240 |
| Ile Met Lys Ile Thr Tyr Glu Gly Lys Glu Asp Asn Lys Lys Ser Tyr | |
| 65 70 75 80 | |
| tta tat tcc agt tta gat aat aaa gga ttt tat aca tat atc tct att | 288 |
| Leu Tyr Ser Ser Leu Asp Asn Lys Gly Phe Tyr Thr Tyr Ile Ser Ile | |
| 85 90 95 | |
| tct att tct ata tat aga aaa ata aca tca tta aat aat aaa ata gaa | 336 |
| Ser Ile Ser Ile Tyr Arg Lys Ile Thr Ser Leu Asn Asn Lys Ile Glu | |
| 100 105 110 | |
| tat aaa ata ata tct aat aaa aca tat tcg cat aca gaa ata aga ata | 384 |
| Tyr Lys Ile Ile Ser Asn Lys Thr Tyr Ser His Thr Glu Ile Arg Ile | |
| 115 120 125 | |
| cct cag tat ata gct cac ggt gga aat aca tca gaa aat gat aat tct | 432 |
| Pro Gln Tyr Ile Ala His Gly Gly Asn Thr Ser Glu Asn Asp Asn Ser | |
| 130 135 140 | |
| ata aca caa tca aat aat cct ggt gga ttt ttt aat gtt tca aaa agt | 480 |
| Ile Thr Gln Ser Asn Asn Pro Gly Gly Phe Phe Asn Val Ser Lys Ser | |
| 145 150 155 160 | |
| tta aaa aaa atg gta act act aga ata gaa caa aca tat att tat cca | 528 |
| Leu Lys Lys Met Val Thr Thr Arg Ile Glu Gln Thr Tyr Ile Tyr Pro | |
| 165 170 175 | |
| aaa cgt aaa aaa act caa aaa gca tat act tat cat ctg gca ttc att | 576 |
| Lys Arg Lys Lys Thr Gln Lys Ala Tyr Thr Tyr His Leu Ala Phe Ile | |
| 180 185 190 | |
| agt aaa aaa cca tca ttt atg atg ata aat gaa aaa tta aac ccg cca | 624 |
| Ser Lys Lys Pro Ser Phe Met Met Ile Asn Glu Lys Leu Asn Pro Pro | |
| 195 200 205 | |
| cag ttt tta act tta gat ata gat ttt aat cca gat aaa ata aaa tgt | 672 |
| Gln Phe Leu Thr Leu Asp Ile Asp Phe Asn Pro Asp Lys Ile Lys Cys | |
| 210 215 220 | |
| gta ata gat tct aaa aaa aca ttc tta caa att gat atc ata gca tta | 720 |
| Val Ile Asp Ser Lys Lys Thr Phe Leu Gln Ile Asp Ile Ile Ala Leu | |
| 225 230 235 240 | |
| ata ata gca tta tct aat gat aac att gat gtt gtt tat aaa aaa ata | 768 |

| | |
|---|------|
| Ile Ile Ala Leu Ser Asn Asp Asn Ile Asp Val Val Tyr Lys Lys Ile | |
| 245 250 255 | |
| agt tct ggt ttt agt gat gat ata tct gat tca atc aaa ata tta ata | 816 |
| Ser Ser Gly Phe Ser Asp Asp Ile Ser Asp Ser Ile Lys Ile Leu Ile | |
| 260 265 270 | |
| gaa aat act aaa aat att tta tct gaa tat aat aat gat gcc aga caa | 864 |
| Glu Asn Thr Lys Asn Ile Leu Ser Glu Tyr Asn Asn Asp Ala Arg Gln | |
| 275 280 285 | |
| tat gtc gac aaa ata atc gaa att aat tat att aaa aaa tat cca aaa | 912 |
| Tyr Val Asp Lys Ile Ile Glu Ile Asn Tyr Ile Lys Lys Tyr Pro Lys | |
| 290 295 300 | |
| aat gaa ata act tta caa gat tat ttt aat aat att ttc aat gat ttt | 960 |
| Asn Glu Ile Thr Leu Gln Asp Tyr Phe Asn Asn Ile Phe Asn Asp Phe | |
| 305 310 315 320 | |
| ctt cct cat ata ggc cga gga aaa tat aat gaa aaa tgt atg tat atg | 1008 |
| Leu Pro His Ile Gly Arg Gly Lys Tyr Asn Glu Lys Cys Met Tyr Met | |
| 325 330 335 | |
| att agt att tta aga caa tct ttt gtt tct ata ttt caa tca gat gtt | 1056 |
| Ile Ser Ile Leu Arg Gln Ser Phe Val Ser Ile Phe Gln Ser Asp Val | |
| 340 345 350 | |
| tat cca gat aaa gat aat tta gct act aga aga att tca act gct gct | 1104 |
| Tyr Pro Asp Lys Asp Asn Leu Ala Thr Arg Arg Ile Ser Thr Ala Ala | |
| 355 360 365 | |
| gat att ttt gag aat ata ata agg act tct att gat aat tct ttc gaa | 1152 |
| Asp Ile Phe Glu Asn Ile Ile Arg Thr Ser Ile Asp Asn Ser Phe Glu | |
| 370 375 380 | |
| tta gca aga gat aaa tat aaa aca tat att agt gga tct ggt aag aac | 1200 |
| Leu Ala Arg Asp Lys Tyr Lys Thr Tyr Ile Ser Gly Ser Gly Lys Asn | |
| 385 390 395 400 | |
| aat aat ata aat aat att tta tct caa gtt aaa tta tta cca caa ata | 1248 |
| Asn Asn Ile Asn Asn Ile Leu Ser Gln Val Lys Leu Leu Pro Gln Ile | |
| 405 410 415 | |
| aca caa gcg ttt aat aat ttt ttc aat atg caa gat act aaa aat agt | 1296 |
| Thr Gln Ala Phe Asn Asn Phe Phe Asn Met Gln Asp Thr Lys Asn Ser | |
| 420 425 430 | |
| gat gtt gta aaa ata gga acc cac tca aat tgg gct gaa tct att tat | 1344 |
| Asp Val Val Lys Ile Gly Thr His Ser Asn Trp Ala Glu Ser Ile Tyr | |
| 435 440 445 | |
| att tct aat gct gta gaa aga ggt gtt agt ata gaa tta aca aaa tca | 1392 |
| Ile Ser Asn Ala Val Glu Arg Gly Val Ser Ile Glu Leu Thr Lys Ser | |
| 450 455 460 | |
| cta act caa aga aaa tta cac gca tca tca att aat gta tta gat atg | 1440 |
| Leu Thr Gln Arg Lys Leu His Ala Ser Ser Ile Asn Val Leu Asp Met | |

| 465 | 470 | 475 | 480 | |
|---|-----|-----|-----|------|
| atg gat aca cct gat cat ggt aca aaa act ggt ctt gta aaa aga tta | | | | 1488 |
| Met Asp Thr Pro Asp His Gly Thr Lys Thr Gly Leu Val Lys Arg Leu | 485 | 490 | 495 | |
| tgt ata agt aca tta ata tca cac tat cct ata cat att aga aaa caa | | | | 1536 |
| Cys Ile Ser Thr Leu Ile Ser His Tyr Pro Ile His Ile Arg Lys Gln | 500 | 505 | 510 | |
| tta ttt gaa gaa gtt aga gaa ttt ata gaa aac aag gtt aaa cat aca | | | | 1584 |
| Leu Phe Glu Glu Val Arg Glu Phe Ile Glu Asn Lys Val Lys His Thr | 515 | 520 | 525 | |
| tta aaa gaa gat att att tcc ggt gta ttt ata tca att ata gat gaa | | | | 1632 |
| Leu Lys Glu Asp Ile Ile Ser Gly Val Phe Ile Ser Ile Ile Asp Glu | 530 | 535 | 540 | |
| tct gaa cac gta ata gct cgt ata aaa aat tca gaa act gaa tct ttt | | | | 1680 |
| Ser Glu His Val Ile Ala Arg Ile Lys Asn Ser Glu Thr Glu Ser Phe | 545 | 550 | 555 | 560 |
| ata aaa gat tta aaa tat gca aaa ata tca gga tta ttt gtt aaa aat | | | | 1728 |
| Ile Lys Asp Leu Lys Tyr Ala Lys Ile Ser Gly Leu Phe Val Lys Asn | 565 | 570 | 575 | |
| gat ata ggt ata gaa ata tta aaa ttt cat gaa tta gat aat aac aaa | | | | 1776 |
| Asp Ile Gly Ile Glu Ile Leu Lys Phe His Glu Leu Asp Asn Asn Lys | 580 | 585 | 590 | |
| caa ata tat gta cca aca gat aga tat ttt caa ata aga ata aat gtt | | | | 1824 |
| Gln Ile Tyr Val Pro Thr Asp Arg Tyr Phe Gln Ile Arg Ile Asn Val | 595 | 600 | 605 | |
| ggt aat aaa aga gca aca caa cca gta ttt aga gta gaa aat ggc gaa | | | | 1872 |
| Gly Asn Lys Arg Ala Thr Gln Pro Val Phe Arg Val Glu Asn Gly Glu | 610 | 615 | 620 | |
| tta gca ttt aat aaa tat cct aat tta cat gct gaa tta aaa gag agt | | | | 1920 |
| Leu Ala Phe Asn Lys Tyr Pro Asn Leu His Ala Glu Leu Lys Glu Ser | 625 | 630 | 635 | 640 |
| aat tct tac act gat ttt gta act aaa tat tat gat att ata gaa gtt | | | | 1968 |
| Asn Ser Tyr Thr Asp Phe Val Thr Lys Tyr Tyr Asp Ile Ile Glu Val | 645 | 650 | 655 | |
| att gac gta gga caa atg ata tat tca aat atg tgt aac aca gtt aca | | | | 2016 |
| Ile Asp Val Gly Gln Met Ile Tyr Ser Asn Met Cys Asn Thr Val Thr | 660 | 665 | 670 | |
| gaa ttt aat agt tac agt tta gaa caa aga aaa aaa tat gat tat gtt | | | | 2064 |
| Glu Phe Asn Ser Tyr Ser Leu Glu Gln Arg Lys Lys Tyr Asp Tyr Val | 675 | 680 | 685 | |
| aga tta cca aat tat tta tat ttt agt tat tta aca tcg act ggt tgt | | | | 2112 |
| Arg Leu Pro Asn Tyr Leu Tyr Phe Ser Tyr Leu Thr Ser Thr Gly Cys | 690 | 695 | 700 | |

| | |
|---|------|
| atg tat gat att ggt aaa atg acg ggt gtt aga ggt aca ttt gga aca | 2160 |
| Met Tyr Asp Ile Gly Lys Met Thr Gly Val Arg Gly Thr Phe Gly Thr | |
| 705 710 715 720 | |
| gcc caa agt aaa cat att ata aca gga cct cca gat aat gta atg aat | 2208 |
| Ala Gln Ser Lys His Ile Ile Thr Gly Pro Pro Asp Asn Val Met Asn | |
| 725 730 735 | |
| aaa tat gat aca tgt aac tat tta gca tat cct ata gaa aga cca tca | 2256 |
| Lys Tyr Asp Thr Cys Asn Tyr Leu Ala Tyr Pro Ile Glu Arg Pro Ser | |
| 740 745 750 | |
| ata act aat att cct atg gaa ata tct ggt ata gca aga aat agt ata | 2304 |
| Ile Thr Asn Ile Pro Met Glu Ile Ser Gly Ile Ala Arg Asn Ser Ile | |
| 755 760 765 | |
| ggg aca cat gtt tta gtg gga ttc ttt agt ttt aat tac aac gta gaa | 2352 |
| Gly Thr His Val Leu Val Gly Phe Phe Ser Phe Asn Tyr Asn Val Glu | |
| 770 775 780 | |
| gat ggc gtt att gta aat aaa gaa tcg ata aat aga gga tta tta tct | 2400 |
| Asp Gly Val Ile Val Asn Lys Glu Ser Ile Asn Arg Gly Leu Leu Ser | |
| 785 790 795 800 | |
| gta ata tca tta atg tct gta aaa aat gaa tta tct gat aca caa ata | 2448 |
| Val Ile Ser Leu Met Ser Val Lys Asn Glu Leu Ser Asp Thr Gln Ile | |
| 805 810 815 | |
| aac aat aat aat cca agt gca gaa aat tct aat aat aat tat tct aaa | 2496 |
| Asn Asn Asn Asn Pro Ser Ala Glu Asn Ser Asn Asn Asn Tyr Ser Lys | |
| 820 825 830 | |
| ata tca gca aca ggt ttg cca tca ata gga act gtt tta gta caa ggt | 2544 |
| Ile Ser Ala Thr Gly Leu Pro Ser Ile Gly Thr Val Leu Val Gln Gly | |
| 835 840 845 | |
| gat gcg tta tac aga tgt tta aaa cca aaa ttt aaa aat gat gat gat | 2592 |
| Asp Ala Leu Tyr Arg Cys Leu Lys Pro Lys Phe Lys Asn Asp Asp Asp | |
| 850 855 860 | |
| aat aga tat ata ttt gat caa tct gaa aca cta tct aat act tat cca | 2640 |
| Asn Arg Tyr Ile Phe Asp Gln Ser Glu Thr Leu Ser Asn Thr Tyr Pro | |
| 865 870 875 880 | |
| gcc gtg gta gaa aga aca aga aaa caa ggt aca gat tta ata aag att | 2688 |
| Ala Val Val Glu Arg Thr Arg Lys Gln Gly Thr Asp Leu Ile Lys Ile | |
| 885 890 895 | |
| gat atg cta ttg tca tca tat aga aga ttg agt gta gga gat aaa ata | 2736 |
| Asp Met Leu Leu Ser Ser Tyr Arg Arg Leu Ser Val Gly Asp Lys Ile | |
| 900 905 910 | |
| gca aaa tct gta caa aaa gtt act gtt tca aaa att atg gaa gaa gaa | 2784 |
| Ala Lys Ser Val Gln Lys Val Thr Val Ser Lys Ile Met Glu Glu Glu | |
| 915 920 925 | |

| | |
|---|------|
| gat atg cct tat aat gaa aat ggc gaa aga cct gat ata ata ttt aat | 2832 |
| Asp Met Pro Tyr Asn Glu Asn Gly Glu Arg Pro Asp Ile Ile Phe Asn | |
| 930 935 940 | |
| agt cct agt att ata agt aga aaa act ctt cct ttg tat gac gaa gtt | 2880 |
| Ser Pro Ser Ile Ile Ser Arg Lys Thr Leu Pro Leu Tyr Asp Glu Val | |
| 945 950 955 960 | |
| tct tta tgt aat atg ttc tca aaa ata cca tat aat gat aaa tgt gat | 2928 |
| Ser Leu Cys Asn Met Phe Ser Lys Ile Pro Tyr Asn Asp Lys Cys Asp | |
| 965 970 975 | |
| gta gaa tat att aat tat cct ata tat act gat aaa agt cct ttg gat | 2976 |
| Val Glu Tyr Ile Asn Tyr Pro Ile Tyr Thr Asp Lys Ser Pro Leu Asp | |
| 980 985 990 | |
| aaa tat aat ttt atc aaa aaa gaa tta aaa aaa ata tat aat aat gta | 3024 |
| Lys Tyr Asn Phe Ile Lys Lys Glu Leu Lys Lys Ile Tyr Asn Asn Val | |
| 995 1000 1005 | |
| act gac gaa gaa tta gaa aat att ata tat tgt cga caa aca tta | 3069 |
| Thr Asp Glu Glu Leu Glu Asn Ile Ile Tyr Cys Arg Gln Thr Leu | |
| 1010 1015 1020 | |
| tat cac cca tat aca aaa aaa cct atg act ata aaa gaa ggt gat | 3114 |
| Tyr His Pro Tyr Thr Lys Lys Pro Met Thr Ile Lys Glu Gly Asp | |
| 1025 1030 1035 | |
| aaa gaa act aaa tca ttt atg gga cct atg tta ttc tgt aga tta | 3159 |
| Lys Glu Thr Lys Ser Phe Met Gly Pro Met Leu Phe Cys Arg Leu | |
| 1040 1045 1050 | |
| tca caa atg tcg gca gat aaa ata tca gta aga aat aga ggc aga | 3204 |
| Ser Gln Met Ser Ala Asp Lys Ile Ser Val Arg Asn Arg Gly Arg | |
| 1055 1060 1065 | |
| tta gat aaa tac atg cag gct ccg tct ggg aaa aaa aaa ggc gga | 3249 |
| Leu Asp Lys Tyr Met Gln Ala Pro Ser Gly Lys Lys Lys Gly Gly | |
| 1070 1075 1080 | |
| ggt att aaa atc gga gaa atg gaa agt gat gtt ttt gct aca aat | 3294 |
| Gly Ile Lys Ile Gly Glu Met Glu Ser Asp Val Phe Ala Thr Asn | |
| 1085 1090 1095 | |
| gga tct gta tat gca ata cat gaa tta caa tca gat cct gat gaa | 3339 |
| Gly Ser Val Tyr Ala Ile His Glu Leu Gln Ser Asp Pro Asp Glu | |
| 1100 1105 1110 | |
| ttt tat tta cca gct cat ata tgt gga aat tgt gga ata ttt gct | 3384 |
| Phe Tyr Leu Pro Ala His Ile Cys Gly Asn Cys Gly Ile Phe Ala | |
| 1115 1120 1125 | |
| act tat gaa gaa aat ata gaa gta aaa aga tgg aaa tgt cta cag | 3429 |
| Thr Tyr Glu Glu Asn Ile Glu Val Lys Arg Trp Lys Cys Leu Gln | |
| 1130 1135 1140 | |
| tgt gaa aat ctt ggt ttg tca cca gaa ata ata aaa atg cgt tta | 3474 |

Cys Glu Asn Leu Gly Leu Ser Pro Glu Ile Ile Lys Met Arg Leu
 1145 1150 1155

act tat gct aca aaa ata ttt atc aca ctt tta aat gct aga ggt 3519
 Thr Tyr Ala Thr Lys Ile Phe Ile Thr Leu Leu Asn Ala Arg Gly
 1160 1165 1170

ata tct cta atc cct gta aaa gat aat cag tct ata cgt tat att 3564
 Ile Ser Leu Ile Pro Val Lys Asp Asn Gln Ser Ile Arg Tyr Ile
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 1 5 10 15

aat cat agc aca gaa gaa ata aaa aat ttt cta att gat aat aat att 96
 Asn His Ser Thr Glu Glu Ile Lys Asn Phe Leu Ile Asp Asn Asn Ile
 20 25 30

aaa tgt ata ata aca ata tgg aat ttt aat aaa tta aat ata aaa aaa 144
 Lys Cys Ile Ile Thr Ile Trp Asn Phe Asn Lys Leu Asn Ile Lys Lys
 35 40 45

tta aat att aat gtt aaa gat tat atg tat ata cac gca tat gat cta 192
 Leu Asn Ile Asn Val Lys Asp Tyr Met Tyr Ile His Ala Tyr Asp Leu
 50 55 60

aca aat gaa ata att att gat tat ttt gat att act aac aaa ttt ata 240
 Thr Asn Glu Ile Ile Ile Asp Tyr Phe Asp Ile Thr Asn Lys Phe Ile
 65 70 75 80

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att aat aaa ata aaa gaa ggt aag aaa gta tta att cat tgt tat gct      288
Ile Asn Lys Ile Lys Glu Gly Lys Lys Val Leu Ile His Cys Tyr Ala
                        85                      90                      95

ggt ata tca aga tct gca agt ata gtt att aat tat ttt atg aat aaa      336
Gly Ile Ser Arg Ser Ala Ser Ile Val Ile Asn Tyr Phe Met Asn Lys
                        100                      105                      110

tat aat ata aat tat gac gaa gct gaa aaa ata gtt agt aaa aaa cga      384
Tyr Asn Ile Asn Tyr Asp Glu Ala Glu Lys Ile Val Ser Lys Lys Arg
                        115                      120                      125

aat ata aaa cca aat ata ttt ttt ata ctt caa tta aaa ttt tat aat      432
Asn Ile Lys Pro Asn Ile Phe Phe Ile Leu Gln Leu Lys Phe Tyr Asn
                        130                      135                      140

tca tat aaa aat ata aat att att tat tta att ata tta ttt gct att      480
Ser Tyr Lys Asn Ile Asn Ile Ile Tyr Leu Ile Ile Leu Phe Ala Ile
145                      150                      155                      160

aga tat aca cta aaa tga      498
Arg Tyr Thr Leu Lys
                        165

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<210> 37

<211> 210

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (210)

<223>

<400> 37

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atg agt gaa aat tta tat tat gta cca gac ata tgt aaa aat tgc aat      48
Met Ser Glu Asn Leu Tyr Tyr Val Pro Asp Ile Cys Lys Asn Cys Asn
1                      5                      10                      15

aag tta aat cct aat aat ata ttg gtg ata gac ggt aca tat aga gct      96
Lys Leu Asn Pro Asn Asn Ile Leu Val Ile Asp Gly Thr Tyr Arg Ala
                        20                      25                      30

gcc tat aat gat tat tat tct gtt agt aat aaa ttg cca tct att aaa      144
Ala Tyr Asn Asp Tyr Tyr Ser Val Ser Asn Lys Leu Pro Ser Ile Lys
35                      40                      45

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aca gaa aaa ggt gga tta gca aaa tat cca aaa aaa tta ttt att aga 192
 Thr Glu Lys Gly Gly Leu Ala Lys Tyr Pro Lys Lys Leu Phe Ile Arg
 50 55 60

aat ggt tat tat aag taa 210
 Asn Gly Tyr Tyr Lys
 65

<210> 38

<211> 2163

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1)..(2163)

<223>

<400> 38
 atg caa gaa att aaa aat att tat gat ttt aaa aca tat aat tta ttt 48
 Met Gln Glu Ile Lys Asn Ile Tyr Asp Phe Lys Thr Tyr Asn Leu Phe
 1 5 10 15

ccc gaa tta cat aat aaa tat aac tat att tca cat tta tta ttt cct 96
 Pro Glu Leu His Asn Lys Tyr Asn Tyr Ile Ser His Leu Leu Phe Pro
 20 25 30

aat aat act aat ata ttt caa tca tat att gat ttt gat tat gta aaa 144
 Asn Asn Thr Asn Ile Phe Gln Ser Tyr Ile Asp Phe Asp Tyr Val Lys
 35 40 45

aaa tat aaa tat aat ttt tta ata tta tta tac cct gtt tac aaa cta 192
 Lys Tyr Lys Tyr Asn Phe Leu Ile Leu Leu Tyr Pro Val Tyr Lys Leu
 50 55 60

tat tgg aaa aat atg tat att tgt tat aat caa aat agt aat aaa ata 240
 Tyr Trp Lys Asn Met Tyr Ile Cys Tyr Asn Gln Asn Ser Asn Lys Ile
 65 70 75 80

tat tta gat aat aaa gaa ata tat aat acc agt att gaa tta att aat 288
 Tyr Leu Asp Asn Lys Glu Ile Tyr Asn Thr Ser Ile Glu Leu Ile Asn
 85 90 95

gat ttt tta ata gat gga ata gat ata aat aat aat att ata act att 336
 Asp Phe Leu Ile Asp Gly Ile Asp Ile Asn Asn Asn Ile Ile Thr Ile

| 100 | 105 | 110 | |
|---|-----|-----|------|
| aga tca aac gga tct aca att act tat tct gca tac gca tat gca aca | | | 384 |
| Arg Ser Asn Gly Ser Thr Ile Thr Tyr Ser Ala Tyr Ala Tyr Ala Thr | | | |
| 115 | 120 | 125 | |
| ata tta tat gat tta cca tat aga tta gga aat tta gat att aat caa | | | 432 |
| Ile Leu Tyr Asp Leu Pro Tyr Arg Leu Gly Asn Leu Asp Ile Asn Gln | | | |
| 130 | 135 | 140 | |
| ata ttt gga att gta gaa agt tct aat ata tta gga ata tta tct aca | | | 480 |
| Ile Phe Gly Ile Val Glu Ser Ser Asn Ile Leu Gly Ile Leu Ser Thr | | | |
| 145 | 150 | 155 | 160 |
| aat gaa gaa caa aaa aaa aag ttt cct aaa tat att aat aat ata gaa | | | 528 |
| Asn Glu Glu Gln Lys Lys Lys Phe Pro Lys Tyr Ile Asn Asn Ile Glu | | | |
| 165 | 170 | 175 | |
| tta gaa aaa aat ata tta ttt aaa ttt aag gaa tct aac ctt aga tca | | | 576 |
| Leu Glu Lys Asn Ile Leu Phe Lys Phe Lys Glu Ser Asn Leu Arg Ser | | | |
| 180 | 185 | 190 | |
| ata caa att gat gta caa tta aaa ata ttt gat tta ttt ata aat aga | | | 624 |
| Ile Gln Ile Asp Val Gln Leu Lys Ile Phe Asp Leu Phe Ile Asn Arg | | | |
| 195 | 200 | 205 | |
| tta aat tgt gtt gtt tct ggt gga act ggt ata gga aaa aca tct att | | | 672 |
| Leu Asn Cys Val Val Ser Gly Gly Thr Gly Ile Gly Lys Thr Ser Ile | | | |
| 210 | 215 | 220 | |
| ata cct aaa ata ata tgg tgg tat aat ctt ctt ttt gat gga tat aat | | | 720 |
| Ile Pro Lys Ile Ile Trp Trp Tyr Asn Leu Leu Phe Asp Gly Tyr Asn | | | |
| 225 | 230 | 235 | 240 |
| atg ttt aat agt aga att tct aat gta tct ata gat aat ttt ata ttt | | | 768 |
| Met Phe Asn Ser Arg Ile Ser Asn Val Ser Ile Asp Asn Phe Ile Phe | | | |
| 245 | 250 | 255 | |
| gat ata aat ata att gaa aaa aat aca tta tta tca tta cct aga aaa | | | 816 |
| Asp Ile Asn Ile Ile Glu Lys Asn Thr Leu Leu Ser Leu Pro Arg Lys | | | |
| 260 | 265 | 270 | |
| act ata ata aat agt act gct att aat tat ata aaa tca cta ggt tat | | | 864 |
| Thr Ile Ile Asn Ser Thr Ala Ile Asn Tyr Ile Lys Ser Leu Gly Tyr | | | |
| 275 | 280 | 285 | |
| tct gaa ata aca gaa act ccc ata ata ata aaa tat aaa gat ata aaa | | | 912 |
| Ser Glu Ile Thr Glu Thr Pro Ile Ile Ile Lys Tyr Lys Asp Ile Lys | | | |
| 290 | 295 | 300 | |
| tta tat aaa gaa tat tat aat aat aaa att att ttt cca act aat tta | | | 960 |
| Leu Tyr Lys Glu Tyr Tyr Asn Asn Lys Ile Ile Phe Pro Thr Asn Leu | | | |
| 305 | 310 | 315 | 320 |
| tta ttg tgt gtt aac aga ttg tca ata aat aat tta aaa aat tcc agt | | | 1008 |
| Leu Leu Cys Val Asn Arg Leu Ser Ile Asn Asn Leu Lys Asn Ser Ser | | | |
| 325 | 330 | 335 | |

| | |
|---|------|
| gtt ata att ata gat gaa ata cac gaa cat gat aga tat gct gac ata | 1056 |
| Val Ile Ile Ile Asp Glu Ile His Glu His Asp Arg Tyr Ala Asp Ile | |
| 340 345 350 | |
| tgt ata gca gta tca tat ttt tta aaa aaa gtt ata aat atc aga aat | 1104 |
| Cys Ile Ala Val Ser Tyr Phe Leu Lys Lys Val Ile Asn Ile Arg Asn | |
| 355 360 365 | |
| ata ata tta ata tct gca aca ata gaa ttt gaa ata gat aat ata tta | 1152 |
| Ile Ile Leu Ile Ser Ala Thr Ile Glu Phe Glu Ile Asp Asn Ile Leu | |
| 370 375 380 | |
| aga ttt ttt aat aat aaa ata gta caa gta tat ata cct gga ttt aca | 1200 |
| Arg Phe Phe Asn Asn Lys Ile Val Gln Val Tyr Ile Pro Gly Phe Thr | |
| 385 390 395 400 | |
| tta ttt cct gtt aca gaa ata gaa aat acg gtt gat agt ata gat aaa | 1248 |
| Leu Phe Pro Val Thr Glu Ile Glu Asn Thr Val Asp Ser Ile Asp Lys | |
| 405 410 415 | |
| ata tta tta gat aat aaa cca cct gtt gga tat tct gtt ata ata ttt | 1296 |
| Ile Leu Leu Asp Asn Lys Pro Pro Val Gly Tyr Ser Val Ile Ile Phe | |
| 420 425 430 | |
| tat gaa tca ata cca aaa tta act ttt att aaa aaa aaa tta gaa gaa | 1344 |
| Tyr Glu Ser Ile Pro Lys Leu Thr Phe Ile Lys Lys Lys Leu Glu Glu | |
| 435 440 445 | |
| agt ata aaa gat cct ata tat aaa ttt tat tct ata cac gga aaa aca | 1392 |
| Ser Ile Lys Asp Pro Ile Tyr Lys Phe Tyr Ser Ile His Gly Lys Thr | |
| 450 455 460 | |
| gat aat gct aat gaa gtt att cgt tat ata gaa aat aat aaa aaa cat | 1440 |
| Asp Asn Ala Asn Glu Val Ile Arg Tyr Ile Glu Asn Asn Lys Lys His | |
| 465 470 475 480 | |
| att cat gtc ata ata agt aca aat tat tta gaa tca tct ata act ata | 1488 |
| Ile His Val Ile Ile Ser Thr Asn Tyr Leu Glu Ser Ser Ile Thr Ile | |
| 485 490 495 | |
| tcg aat gct aaa tta gta ata gat aat gga aaa gta tat aga aaa gaa | 1536 |
| Ser Asn Ala Lys Leu Val Ile Asp Asn Gly Lys Val Tyr Arg Lys Glu | |
| 500 505 510 | |
| ttt ata gat gga aat ata aca tat ata aca aat agt atg tat aaa caa | 1584 |
| Phe Ile Asp Gly Asn Ile Thr Tyr Ile Thr Asn Ser Met Tyr Lys Gln | |
| 515 520 525 | |
| aga aaa ggt aga gta gga aga gtg tca aaa gga aca tat ata aga aca | 1632 |
| Arg Lys Gly Arg Val Gly Arg Val Ser Lys Gly Thr Tyr Ile Arg Thr | |
| 530 535 540 | |
| tac aca tta gat aaa tta aat act aat ttt aaa aat ata aat tat caa | 1680 |
| Tyr Thr Leu Asp Lys Leu Asn Thr Asn Phe Lys Asn Ile Asn Tyr Gln | |
| 545 550 555 560 | |

| | |
|---|------|
| tat tta tgg gat tac ata ata att ttt aaa tat tat ggt tta gat ata | 1728 |
| Tyr Leu Trp Asp Tyr Ile Ile Ile Phe Lys Tyr Tyr Gly Leu Asp Ile | |
| 565 570 575 | |
| aaa aaa gat tat ttt gta att cct gat aat att aat aga gta gat aaa | 1776 |
| Lys Lys Asp Tyr Phe Val Ile Pro Asp Asn Ile Asn Arg Val Asp Lys | |
| 580 585 590 | |
| act gtt aat tat atg aag tct ata gga ata gat ata gat aaa tgt ata | 1824 |
| Thr Val Asn Tyr Met Lys Ser Ile Gly Ile Asp Ile Asp Lys Cys Ile | |
| 595 600 605 | |
| aat aaa ata tat aga att ttt aat aaa tat gaa att aat atg tta gaa | 1872 |
| Asn Lys Ile Tyr Arg Ile Phe Asn Lys Tyr Glu Ile Asn Met Leu Glu | |
| 610 615 620 | |
| tat ttt att ata tat ttg tat ggt tca gaa act gag aaa tta tta ttg | 1920 |
| Tyr Phe Ile Ile Tyr Leu Tyr Gly Ser Glu Thr Glu Lys Leu Leu Leu | |
| 625 630 635 640 | |
| agc aca gat gat aaa aat ata att gat ata cct tat aaa ata tat aat | 1968 |
| Ser Thr Asp Asp Lys Asn Ile Ile Asp Ile Pro Tyr Lys Ile Tyr Asn | |
| 645 650 655 | |
| ata tat gta aaa atg aat gta aaa ata aaa ttg gaa tct aaa aga agt | 2016 |
| Ile Tyr Val Lys Met Asn Val Lys Ile Lys Leu Glu Ser Lys Arg Ser | |
| 660 665 670 | |
| att ata tat ata ttt aaa ttt att aat gat gta tat gat ggt ccg caa | 2064 |
| Ile Ile Tyr Ile Phe Lys Phe Ile Asn Asp Val Tyr Asp Gly Pro Gln | |
| 675 680 685 | |
| aaa ttt aaa tat att aat aca gac gaa aat gta tat ttt gat aaa aat | 2112 |
| Lys Phe Lys Tyr Ile Asn Thr Asp Glu Asn Val Tyr Phe Asp Lys Asn | |
| 690 695 700 | |
| aaa ata tat tat tta aaa tct gaa aat cca ctg att att atg aga gat | 2160 |
| Lys Ile Tyr Tyr Leu Lys Ser Glu Asn Pro Leu Ile Ile Met Arg Asp | |
| 705 710 715 720 | |
| taa | 2163 |

<210> 39

<211> 813

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (813)

<223>

<400> 39

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|---|-----|
| atg tat ata caa ata cca gaa tat aaa aag tca tat atg tgt aaa agt | 48 |
| Met Tyr Ile Gln Ile Pro Glu Tyr Lys Lys Ser Tyr Met Cys Lys Ser | |
| 1 5 10 15 | |
| tta ata aac tct gga aca tac gga att gta tat aaa tat gca gat att | 96 |
| Leu Ile Asn Ser Gly Thr Tyr Gly Ile Val Tyr Lys Tyr Ala Asp Ile | |
| 20 25 30 | |
| tat aca aaa aat aat gtt gcg att aaa ttt ttt aga aat aat gat aat | 144 |
| Tyr Thr Lys Asn Asn Val Ala Ile Lys Phe Phe Arg Asn Asn Asp Asn | |
| 35 40 45 | |
| ttt aca cac gaa ata aat att tta aat tat att aaa aaa aaa ata tat | 192 |
| Phe Thr His Glu Ile Asn Ile Leu Asn Tyr Ile Lys Lys Lys Ile Tyr | |
| 50 55 60 | |
| aat aat tct gat agt gat gaa ata aac gaa gtt aaa aaa aat atc tgt | 240 |
| Asn Asn Ser Asp Ser Asp Glu Ile Asn Glu Val Lys Lys Asn Ile Cys | |
| 65 70 75 80 | |
| ttt ccg ata ttt ttt aca aat gaa aat aat gtt tca aaa tat att ata | 288 |
| Phe Pro Ile Phe Phe Thr Asn Glu Asn Asn Val Ser Lys Tyr Ile Ile | |
| 85 90 95 | |
| ttt aat tat tat gat tat gat tta tta tat tac gca tct aca tat ata | 336 |
| Phe Asn Tyr Tyr Asp Tyr Asp Leu Leu Tyr Tyr Ala Ser Thr Tyr Ile | |
| 100 105 110 | |
| tta ctt aat caa gat ata tta aat ata agt tta caa ata tgc aat gga | 384 |
| Leu Leu Asn Gln Asp Ile Leu Asn Ile Ser Leu Gln Ile Cys Asn Gly | |
| 115 120 125 | |
| ctg aaa tat tta cat aaa aat tct att gtt cat tgt gat tta aaa cca | 432 |
| Leu Lys Tyr Leu His Lys Asn Ser Ile Val His Cys Asp Leu Lys Pro | |
| 130 135 140 | |
| gag aat ata tta tgt aaa tat aaa aat gat aca ttg cat ctt gtt ata | 480 |
| Glu Asn Ile Leu Cys Lys Tyr Lys Asn Asp Thr Leu His Leu Val Ile | |
| 145 150 155 160 | |
| aca gat ttt gga tta tcg tat ata gaa aat aat att att gat tat gaa | 528 |
| Thr Asp Phe Gly Leu Ser Tyr Ile Glu Asn Asn Ile Ile Asp Tyr Glu | |
| 165 170 175 | |
| atc gta aca ttt agt tat aga tct cct gaa tta ata tgt act att aat | 576 |
| Ile Val Thr Phe Ser Tyr Arg Ser Pro Glu Leu Ile Cys Thr Ile Asn | |
| 180 185 190 | |
| aat aaa aac aat ata att gta aag tct tct ata gat atg tgg tct ttt | 624 |
| Asn Lys Asn Asn Ile Ile Val Lys Ser Ser Ile Asp Met Trp Ser Phe | |

| 195 | 200 | 205 | |
|---|-----|-----|-----|
| ggg gta att ata tat ttt tta att aat aaa ttt tat ttt gat att tat | | | 672 |
| Gly Val Ile Ile Tyr Phe Leu Ile Asn Lys Phe Tyr Phe Asp Ile Tyr | | | |
| 210 | 215 | 220 | |
| aat att gaa aaa tat ata gaa tct aat cct ata aaa aaa tta tgt aac | | | 720 |
| Asn Ile Glu Lys Tyr Ile Glu Ser Asn Pro Ile Lys Lys Leu Cys Asn | | | |
| 225 | 230 | 235 | 240 |
| att aac tcg att gtt gat aga ctg cta caa tat gaa aaa gat aga tat | | | 768 |
| Ile Asn Ser Ile Val Asp Arg Leu Leu Gln Tyr Glu Lys Asp Arg Tyr | | | |
| 245 | 250 | 255 | |
| aca agt tat caa ata tat aat gat ctg aaa aaa tta ttg aaa taa | | | 813 |
| Thr Ser Tyr Gln Ile Tyr Asn Asp Leu Lys Lys Leu Leu Lys | | | |
| 260 | 265 | 270 | |

<210> 40

<211> 2181

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (2181)

<223>

<400> 40

| | | |
|---|----|-----|
| atg tca gac gaa tat ata tat tta cag aaa tct tta aat gtt act aaa | | 48 |
| Met Ser Asp Glu Tyr Ile Tyr Leu Gln Lys Ser Leu Asn Val Thr Lys | | |
| 1 | 5 | 10 |
| gaa tct aaa ata gat tta ata tta aat gat aaa act agt aaa gat tta | | 96 |
| Glu Ser Lys Ile Asp Leu Ile Leu Asn Asp Lys Thr Ser Lys Asp Leu | | |
| 20 | 25 | 30 |
| gtt aaa ata agt ata tcc aaa ata tgt aga agt att tta aaa tat aaa | | 144 |
| Val Lys Ile Ser Ile Ser Lys Ile Cys Arg Ser Ile Leu Lys Tyr Lys | | |
| 35 | 40 | 45 |
| gat agc aat caa cct att tct gaa tat cat gaa ttt ata ctt gat gat | | 192 |
| Asp Ser Asn Gln Pro Ile Ser Glu Tyr His Glu Phe Ile Leu Asp Asp | | |
| 50 | 55 | 60 |
| att act gat tat ttt aaa tta ttt ttt gat ata gat tgt aaa aca gaa | | 240 |

| | |
|---|-----|
| Ile Thr Asp Tyr Phe Lys Leu Phe Phe Asp Ile Asp Cys Lys Thr Glu | |
| 65 70 75 80 | |
| tat gaa atc gat gat gtt aaa aaa tat att aaa gaa ttt aaa aaa ttt | 288 |
| Tyr Glu Ile Asp Asp Val Lys Lys Tyr Ile Lys Glu Phe Lys Lys Phe | |
| 85 90 95 | |
| ata tca tat gaa ttg tat aat ata ttt tct aat aat ttt gat ata gag | 336 |
| Ile Ser Tyr Glu Leu Tyr Asn Ile Phe Ser Asn Asn Phe Asp Ile Glu | |
| 100 105 110 | |
| aat cat aac atc gat aat ata aaa aaa ttt ata ttt aat aat att tac | 384 |
| Asn His Asn Ile Asp Asn Ile Lys Lys Phe Ile Phe Asn Asn Ile Tyr | |
| 115 120 125 | |
| tat aca tta tct gat aat ccg cac aaa tta tct tta cat ata ttt ttt | 432 |
| Tyr Thr Leu Ser Asp Asn Pro His Lys Leu Ser Leu His Ile Phe Phe | |
| 130 135 140 | |
| aat caa ata tta gta agt cct aca tca ttt ata caa tta aag aaa tat | 480 |
| Asn Gln Ile Leu Val Ser Pro Thr Ser Phe Ile Gln Leu Lys Lys Tyr | |
| 145 150 155 160 | |
| ata ata aat tta aga tca aaa ata aat aat att tta atc aat aat ata | 528 |
| Ile Ile Asn Leu Arg Ser Lys Ile Asn Asn Ile Leu Ile Asn Asn Ile | |
| 165 170 175 | |
| gat tta gct cct ttt aga aga aat aca caa tta aga ttt ata tat agt | 576 |
| Asp Leu Ala Pro Phe Arg Arg Asn Thr Gln Leu Arg Phe Ile Tyr Ser | |
| 180 185 190 | |
| aag aaa aat gat agt gaa tat ttt cac tca gag cat gat tat aat ata | 624 |
| Lys Lys Asn Asp Ser Glu Tyr Phe His Ser Glu His Asp Tyr Asn Ile | |
| 195 200 205 | |
| gaa aat ata gaa gat tta aaa aaa tat ata ata aca tat aaa aat ttt | 672 |
| Glu Asn Ile Glu Asp Leu Lys Lys Tyr Ile Ile Thr Tyr Lys Asn Phe | |
| 210 215 220 | |
| aat gaa cca cat att ata ata aaa gca aaa gat aat aat tta aca aat | 720 |
| Asn Glu Pro His Ile Ile Ile Lys Ala Lys Asp Asn Asn Leu Thr Asn | |
| 225 230 235 240 | |
| ctt gat gta att tat cct cat att aaa tat ttt aga ggt cct cat ttt | 768 |
| Leu Asp Val Ile Tyr Pro His Ile Lys Tyr Phe Arg Gly Pro His Phe | |
| 245 250 255 | |
| att aga aat att tct aaa gaa tta tat aat aat tat aaa att aca att | 816 |
| Ile Arg Asn Ile Ser Lys Glu Leu Tyr Asn Asn Tyr Lys Ile Thr Ile | |
| 260 265 270 | |
| tct gat gat tca att cag tta ttt aaa aaa aaa cat agc gct gaa tta | 864 |
| Ser Asp Asp Ser Ile Gln Leu Phe Lys Lys Lys His Ser Ala Glu Leu | |
| 275 280 285 | |
| gac gaa att att gat ata aat ttg ata ttt aat act cct gat tgt aaa | 912 |
| Asp Glu Ile Ile Asp Ile Asn Leu Ile Phe Asn Thr Pro Asp Cys Lys | |

| 290 | 295 | 300 | |
|---|-----|-----|------|
| ata tgt ggt aaa aat tct tta cat aaa aat aat aga att ata aaa ttt | | | 960 |
| Ile Cys Gly Lys Asn Ser Leu His Lys Asn Asn Arg Ile Ile Lys Phe | | | |
| 305 | 310 | 315 | 320 |
| aca gaa caa aaa ata att tta ttt aag agt gga aat cca aga aat tgt | | | 1008 |
| Thr Glu Gln Lys Ile Ile Leu Phe Lys Ser Gly Asn Pro Arg Asn Cys | | | |
| 325 | 330 | | 335 |
| aat aca tta aaa tat gat tat cct acg tta tca gga tat gaa ttg gct | | | 1056 |
| Asn Thr Leu Lys Tyr Asp Tyr Pro Thr Leu Ser Gly Tyr Glu Leu Ala | | | |
| 340 | 345 | | 350 |
| aat ttt ata aga gat tta aat att att aaa aag ata gat tct gat gca | | | 1104 |
| Asn Phe Ile Arg Asp Leu Asn Ile Ile Lys Lys Ile Asp Ser Asp Ala | | | |
| 355 | 360 | | 365 |
| tat gtt tat tgg aaa aat gga aaa tgg gca atc gtt gat aat cct tat | | | 1152 |
| Tyr Val Tyr Trp Lys Asn Gly Lys Trp Ala Ile Val Asp Asn Pro Tyr | | | |
| 370 | 375 | | 380 |
| att ttt caa gga ata agt aat atg ata tta gaa aaa tac aga aac aat | | | 1200 |
| Ile Phe Gln Gly Ile Ser Asn Met Ile Leu Glu Lys Tyr Arg Asn Asn | | | |
| 385 | 390 | 395 | 400 |
| atg tta ata caa gat ata gat tat att ata aaa aaa ttt ttt gga gaa | | | 1248 |
| Met Leu Ile Gln Asp Ile Asp Tyr Ile Ile Lys Lys Phe Phe Gly Glu | | | |
| 405 | 410 | | 415 |
| gca aaa aat aga ata agt gct aac tta tct atg aat aca gat att att | | | 1296 |
| Ala Lys Asn Arg Ile Ser Ala Asn Leu Ser Met Asn Thr Asp Ile Ile | | | |
| 420 | 425 | | 430 |
| tgt ttt aat cct tat att ata caa ttt aat aat gga gta tat gat tta | | | 1344 |
| Cys Phe Asn Pro Tyr Ile Ile Gln Phe Asn Asn Gly Val Tyr Asp Leu | | | |
| 435 | 440 | | 445 |
| aaa gaa tct aaa ttt tat act ggc gag aat gca aaa aaa tat att cgt | | | 1392 |
| Lys Glu Ser Lys Phe Tyr Thr Gly Glu Asn Ala Lys Lys Tyr Ile Arg | | | |
| 450 | 455 | 460 | |
| cta aac tat att aaa att gat tat aaa gat ata gaa gat atg tct gat | | | 1440 |
| Leu Asn Tyr Ile Lys Ile Asp Tyr Lys Asp Ile Glu Asp Met Ser Asp | | | |
| 465 | 470 | 475 | 480 |
| gaa gaa aaa att aaa ttt gaa aat aat tat aat att ctt tta aaa tta | | | 1488 |
| Glu Glu Lys Ile Lys Phe Glu Asn Asn Tyr Asn Ile Leu Leu Lys Leu | | | |
| 485 | 490 | | 495 |
| ttt aat tta gtt att ccc aaa tct aat cct aaa agg ata gtt ttt gaa | | | 1536 |
| Phe Asn Leu Val Ile Pro Lys Ser Asn Pro Lys Arg Ile Val Phe Glu | | | |
| 500 | 505 | | 510 |
| act aat tta tcg tct gtg tta cat tat tgt cat aaa agt gtt ata aca | | | 1584 |
| Thr Asn Leu Ser Ser Val Leu His Tyr Cys His Lys Ser Val Ile Thr | | | |
| 515 | 520 | 525 | |

| | |
|---|------|
| ata tta tat ggt cca act tct gga ggt aaa tct act att aaa tat tta | 1632 |
| Ile Leu Tyr Gly Pro Thr Ser Gly Gly Lys Ser Thr Ile Lys Tyr Leu | |
| 530 535 540 | |
| tta aga caa tta ttg ttt gac atg ttt tta gaa cct cct ata gaa ttt | 1680 |
| Leu Arg Gln Leu Leu Phe Asp Met Phe Leu Glu Pro Pro Ile Glu Phe | |
| 545 550 555 560 | |
| tat caa aat tat att cca aaa aat tca ccc aac tct tgg tta ggt aaa | 1728 |
| Tyr Gln Asn Tyr Ile Pro Lys Asn Ser Pro Asn Ser Trp Leu Gly Lys | |
| 565 570 575 | |
| gta gaa gat aaa tta gtt tct ttt gct tgc gaa ggt gat gtt aat cga | 1776 |
| Val Glu Asp Lys Leu Val Ser Phe Ala Ser Glu Gly Asp Val Asn Arg | |
| 580 585 590 | |
| aat gaa gta ttt cta aac aaa aat ata aaa caa tat aca gaa caa tat | 1824 |
| Asn Glu Val Phe Leu Asn Lys Asn Ile Lys Gln Tyr Thr Glu Gln Tyr | |
| 595 600 605 | |
| att tta ggt aga gat tta aat aaa tct aaa tgt gtt cac aaa aat aca | 1872 |
| Ile Leu Gly Arg Asp Leu Asn Lys Ser Lys Cys Val His Lys Asn Thr | |
| 610 615 620 | |
| tta aca caa ttt ata gat tta aat cca aaa cct atg ttt agt tca gta | 1920 |
| Leu Thr Gln Phe Ile Asp Leu Asn Pro Lys Pro Met Phe Ser Ser Val | |
| 625 630 635 640 | |
| gat cct gct ttg gtc aaa cgt att gca gtt ata gaa ata aat gag acg | 1968 |
| Asp Pro Ala Leu Val Lys Arg Ile Ala Val Ile Glu Ile Asn Glu Thr | |
| 645 650 655 | |
| caa ttc gtc aat gaa aaa tta tca cga gat act gtc aat ata aca tca | 2016 |
| Gln Phe Val Asn Glu Lys Leu Ser Arg Asp Thr Val Asn Ile Thr Ser | |
| 660 665 670 | |
| gat aat aga aat ata gta ata gca gat tct acg ttt gac gat aaa att | 2064 |
| Asp Asn Arg Asn Ile Val Ile Ala Asp Ser Thr Phe Asp Asp Lys Ile | |
| 675 680 685 | |
| tta aat aat gaa ttt acg cta ccg tta ttt tat att ctg aag aaa tgg | 2112 |
| Leu Asn Asn Glu Phe Thr Leu Pro Leu Phe Tyr Ile Leu Lys Lys Trp | |
| 690 695 700 | |
| tct aaa aaa tac cat aaa gat act gtc aaa tta tta tac acc cct gac | 2160 |
| Ser Lys Lys Tyr His Lys Asp Thr Val Lys Leu Leu Tyr Thr Pro Asp | |
| 705 710 715 720 | |
| ttt ttt gat aaa caa aat tga | 2181 |
| Phe Phe Asp Lys Gln Asn | |
| 725 | |

<210> 41

<211> 1885

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1)..(1885)

<223>

<400> 41

| | |
|---|-----|
| atg gaa gaa tta tat tca tta ata aac tac gca tat tct aat gat att | 48 |
| Met Glu Glu Leu Tyr Ser Leu Ile Asn Tyr Ala Tyr Ser Asn Asp Ile | |
| 1 5 10 15 | |
| aaa aga aca ata gta aat ttt aga ttt tcg att gat aat aaa ata tat | 96 |
| Lys Arg Thr Ile Val Asn Phe Arg Phe Ser Ile Asp Asn Lys Ile Tyr | |
| 20 25 30 | |
| aaa aat tta ttt tct aat ttt cgc gaa gat ata ata att aat aat gaa | 144 |
| Lys Asn Leu Phe Ser Asn Phe Arg Glu Asp Ile Ile Ile Asn Asn Glu | |
| 35 40 45 | |
| tat tct agt act aaa ctt aat aat att aaa aac ata gta gaa gtt aga | 192 |
| Tyr Ser Ser Thr Lys Leu Asn Asn Ile Lys Asn Ile Val Glu Val Arg | |
| 50 55 60 | |
| tgt tgt tat aaa aat aaa aat ata att aat tta tcg ttg ata aat ccc | 240 |
| Cys Cys Tyr Lys Asn Lys Asn Ile Ile Asn Leu Ser Leu Ile Asn Pro | |
| 65 70 75 80 | |
| gaa ata tat aaa aat att att aat ata aat aat aaa aat aat aaa aaa | 288 |
| Glu Ile Tyr Lys Asn Ile Ile Asn Ile Asn Asn Lys Asn Asn Lys Lys | |
| 85 90 95 | |
| aaa tgc att aat att aat gcc att aaa gaa aat gaa aat aca caa tat | 336 |
| Lys Cys Ile Asn Ile Asn Ala Ile Lys Glu Asn Glu Asn Thr Gln Tyr | |
| 100 105 110 | |
| ctt aaa tat tat tta aat aat tgc aat act agt ttt gat tct ttt att | 384 |
| Leu Lys Tyr Tyr Leu Asn Asn Cys Asn Thr Ser Phe Asp Ser Phe Ile | |
| 115 120 125 | |
| aaa aaa aaa aaa gaa aag aag aaa act tta ata aag tta ttt aat aat | 432 |
| Lys Lys Lys Lys Glu Lys Lys Lys Thr Leu Ile Lys Leu Phe Asn Asn | |
| 130 135 140 | |
| gat aat gtg cat aat ata tca aat aac act aat cat act aga tat tat | 480 |
| Asp Asn Val His Asn Ile Ser Asn Asn Thr Asn His Thr Arg Tyr Tyr | |

| 145 | 150 | 155 | 160 | |
|-----------------|---------------------|---------------------|-----------------|------|
| gaa ata gag tct | gaa tat aat aac tta | aca tca gag gtt | aca ata aaa | 528 |
| Glu Ile Glu Ser | Glu Tyr Asn Asn Leu | Thr Ser Glu Val Thr | Ile Lys | |
| | 165 | 170 | 175 | |
| tat aaa ata ata | tta gaa ata att aat | gaa aaa att att | act gaa ggt | 576 |
| Tyr Lys Ile Ile | Leu Glu Ile Ile | Asn Glu Lys Ile | Ile Thr Glu Gly | |
| | 180 | 185 | 190 | |
| aga tta tta tta | cca aat tct att agt | ata act gtt tca | aat aga tca | 624 |
| Arg Leu Leu Leu | Pro Asn Ser Ile | Ser Ile Thr Val | Ser Asn Arg Ser | |
| | 195 | 200 | 205 | |
| aga att ata tta | tat gat aat aat aaa | ata cag ata ata | tta tca aaa | 672 |
| Arg Ile Ile Leu | Tyr Asp Asn Asn Lys | Ile Gln Ile Ile | Leu Ser Lys | |
| | 210 | 215 | 220 | |
| gat aaa tca gaa | aat aat atg caa | gat ttt aat aat | ata tgt tct aat | 720 |
| Asp Lys Ser Glu | Asn Asn Met Gln | Asp Phe Asn Asn | Ile Cys Ser Asn | |
| | 225 | 230 | 235 | 240 |
| ata tta aaa aca | ttc ttc tct ata | aca aaa gaa tac | aca aat aat gaa | 768 |
| Ile Leu Lys Thr | Phe Phe Ser Ile | Thr Lys Glu Tyr | Thr Asn Asn Glu | |
| | 245 | 250 | 255 | |
| ata aac gaa aaa | cac ata aaa tcg | ctt agt ata cat | tgt gat ttt aat | 816 |
| Ile Asn Glu Lys | His Ile Lys Ser | Leu Ser Ile His | Cys Asp Phe Asn | |
| | 260 | 265 | 270 | |
| tat act aat agt | ata tta aaa tac | cca ata ttt ttt | gaa gat aaa aaa | 864 |
| Tyr Thr Asn Ser | Ile Leu Lys Tyr | Pro Ile Phe Phe | Glu Asp Lys Lys | |
| | 275 | 280 | 285 | |
| ata agg ttt ttt | gga aaa aat aaa | att agt ata aaa | tcc ata aca tca | 912 |
| Ile Arg Phe Phe | Gly Lys Asn Lys | Ile Ser Ile Lys | Ser Ile Thr Ser | |
| | 290 | 295 | 300 | |
| aaa tct aaa tta | gag aaa att tac | aca tat ata gaa | aaa aat ata tgt | 960 |
| Lys Ser Lys Leu | Glu Lys Ile Tyr | Thr Tyr Ile Glu | Lys Asn Ile Cys | |
| | 305 | 310 | 315 | 320 |
| aat ata caa aaa | ttg tat gat gat | ata gat aat tgt | gat ccg ata aat | 1008 |
| Asn Ile Gln Lys | Leu Tyr Asp Asp | Ile Asp Asn Cys | Asp Pro Ile Asn | |
| | 325 | 330 | 335 | |
| gat ccc att gat | gat ata aat aca | cta gta aat aaa | ata tat ttc aat | 1056 |
| Asp Pro Ile Asp | Asp Ile Asn Thr | Leu Val Asn Lys | Ile Tyr Phe Asn | |
| | 340 | 345 | 350 | |
| aat tta ttg aaa | taa aat aaa tta | ata tta aat tat | aat gga ttt aat | 1104 |
| Asn Leu Leu Lys | Asn Lys Leu Ile | Leu Asn Tyr Asn | Gly Phe Asn | |
| | 355 | 360 | 365 | |
| aga ata cga caa | taa tca tta tat | tga acc tat tgc | taa tag aaa aga | 1152 |
| Arg Ile Arg Gln | Ser Leu Tyr | Thr Tyr Cys | Lys Arg | |
| | 370 | 375 | | |

| | |
|---|------|
| tat ata tct aaa ttt tgt aac agc gcc ttt ggt gca aga tat aga ttg | 1200 |
| Tyr Ile Ser Lys Phe Cys Asn Ser Ala Phe Gly Ala Arg Tyr Arg Leu | |
| 380 385 390 395 | |
| ttc att aat aaa aca tga gga taa tat tta tga tgt tac taa ata ttt | 1248 |
| Phe Ile Asn Lys Thr Gly Tyr Leu Cys Tyr Ile Phe | |
| 400 405 | |
| tgt att taa aac ata caa tta cga aga tat ata tat agt tta tga tgt | 1296 |
| Cys Ile Asn Ile Gln Leu Arg Arg Tyr Ile Tyr Ser Leu Cys | |
| 410 415 420 | |
| gtt att aaa caa agt tgt att att taa att taa ttt tac aat aaa aga | 1344 |
| Val Ile Lys Gln Ser Cys Ile Ile Ile Phe Tyr Asn Lys Arg | |
| 425 430 435 | |
| ata tat aat tat aaa taa ttt ttt aat aat aat tta taa tga caa cga | 1392 |
| Ile Tyr Asn Tyr Lys Phe Phe Asn Asn Asn Leu Gln Arg | |
| 440 445 | |
| taa cat aat aat tga tat cga aga taa aaa ata tat aaa att taa aaa | 1440 |
| His Asn Asn Tyr Arg Arg Lys Ile Tyr Lys Ile Lys | |
| 450 455 460 | |
| atg gaa atc ttt att act aaa ttg tac aca aat agc taa tta tat taa | 1488 |
| Met Glu Ile Phe Ile Thr Lys Leu Tyr Thr Asn Ser Leu Tyr | |
| 465 470 | |
| att aat aga aga tga aaa taa aaa aat att tgt taa ata tat aac aaa | 1536 |
| Ile Asn Arg Arg Lys Lys Asn Ile Cys Ile Tyr Asn Lys | |
| 475 480 485 | |
| aaa tga tat ttt aat aga taa taa tac tat tga taa taa taa aat aaa | 1584 |
| Lys Tyr Phe Asn Arg Tyr Tyr Asn Lys | |
| 490 495 | |
| aaa ata taa taa aat aaa atg tat taa tat aga aaa taa agt tac att | 1632 |
| Lys Ile Asn Lys Met Tyr Tyr Arg Lys Ser Tyr Ile | |
| 500 505 | |
| atc aat att aga caa taa taa tga att ata tat aaa taa taa att att | 1680 |
| Ile Asn Ile Arg Gln Ile Ile Tyr Lys Ile Ile | |
| 510 515 | |
| taa gct aga tta caa tat ata taa tat att taa ttt ttc gtt aaa aca | 1728 |
| Ala Arg Leu Gln Tyr Ile Tyr Ile Phe Phe Val Lys Thr | |
| 520 525 530 | |
| tgt att att att aac aga tat aga cga tgg aaa tat tat aat ttt aaa | 1776 |
| Cys Ile Ile Ile Asn Arg Tyr Arg Arg Trp Lys Tyr Tyr Asn Phe Lys | |
| 535 540 545 | |
| ttt aga aaa ttt aga aca aga tga ata caa aaa tta tta tga tat aat | 1824 |
| Phe Arg Lys Phe Arg Thr Arg Ile Gln Lys Leu Leu Tyr Asn | |
| 550 555 560 | |

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agt aat gat aaa tga taa gtt tta taa taa tat cag aaa cgc att ttt      1872
Ser Asn Asp Lys          Val Leu          Tyr Gln Lys Arg Ile Phe
                    565                      570

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agt taa tga tta a                      1885
Ser          Leu
575

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<210> 42

<211> 789

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (789)

<223>

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<400> 42
atg ctc gat ata acc aaa tct att ata tct tcg ggt ata aat ata aaa      48
Met Leu Asp Ile Thr Lys Ser Ile Ile Ser Ser Gly Ile Asn Ile Lys
1                    5                      10                      15

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tta cca agt gtt aac ata ata caa aat ata aaa cca aaa tat tat aat      96
Leu Pro Ser Val Asn Ile Ile Gln Asn Ile Lys Pro Lys Tyr Tyr Asn
                20                      25                      30

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aat agt tct ccc aaa tca tat ttt ggg att ata tat cat tta ttg tca      144
Asn Ser Ser Pro Lys Ser Tyr Phe Gly Ile Ile Tyr His Leu Leu Ser
                35                      40                      45

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ata gtt ata gaa ata caa gac aca tat aaa tta aat gat aat ata gga      192
Ile Val Ile Glu Ile Gln Asp Thr Tyr Lys Leu Asn Asp Asn Ile Gly
                50                      55                      60

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tat ttt aca aaa tat gat gat atg aag aaa aaa aat aaa aca gat tac      240
Tyr Phe Thr Lys Tyr Asp Asp Met Lys Lys Lys Asn Lys Thr Asp Tyr
65                      70                      75                      80

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gat tat tct tat aat aat ctt ttt aaa aca gat att aaa tta gaa aaa      288
Asp Tyr Ser Tyr Asn Asn Leu Phe Lys Thr Asp Ile Lys Leu Glu Lys
                85                      90                      95

```

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agt ggt tca tcg atg aag aat tgg aca aat ata tat aat aca aca gat      336
Ser Gly Ser Ser Met Lys Asn Trp Thr Asn Ile Tyr Asn Thr Thr Asp
                100                      105                      110

```

gtt act att gat ata tta aat ccg tta aat aaa aaa cac gat aaa cta 384
 Val Thr Ile Asp Ile Leu Asn Pro Leu Asn Lys Lys His Asp Lys Leu
 115 120 125

tct ata aga tta cct tgt gta ata tct aca tct gtt ata cat tat tta 432
 Ser Ile Arg Leu Pro Cys Val Ile Ser Thr Ser Val Ile His Tyr Leu
 130 135 140

tat att tta tca tat att tat gaa tca gtt aca tta ata aaa gaa gat 480
 Tyr Ile Leu Ser Tyr Ile Tyr Glu Ser Val Thr Leu Ile Lys Glu Asp
 145 150 155 160

ttg tgg tta aac gat agt ttt ata gtt aaa tgt gaa aat tta aga aca 528
 Leu Trp Leu Asn Asp Ser Phe Ile Val Lys Cys Glu Asn Leu Arg Thr
 165 170 175

aat aat tat aat aat gta aaa tcg cag tta aaa aca att gta ttt aat 576
 Asn Asn Tyr Asn Asn Val Lys Ser Gln Leu Lys Thr Ile Val Phe Asn
 180 185 190

gaa aaa aca aga caa tat aaa ata gac gga tta ttt aaa aat ttc ata 624
 Glu Lys Thr Arg Gln Tyr Lys Ile Asp Gly Leu Phe Lys Asn Phe Ile
 195 200 205

ata gac gaa agt ttt aaa aat ata ata agt aaa ttt att aat gat att 672
 Ile Asp Glu Ser Phe Lys Asn Ile Ile Ser Lys Phe Ile Asn Asp Ile
 210 215 220

caa tgt gtt ata tgc gat cta tgg tta act att caa aaa aat ata aat 720
 Gln Cys Val Ile Cys Asp Leu Trp Leu Thr Ile Gln Lys Asn Ile Asn
 225 230 235 240

gat tca cca tct gat aga aaa aaa att tat tgg gaa gaa tat gat aat 768
 Asp Ser Pro Ser Asp Arg Lys Lys Ile Tyr Trp Glu Glu Tyr Asp Asn
 245 250 255

att ttg gga ttt caa aat tga 789
 Ile Leu Gly Phe Gln Asn
 260

<210> 43

<211> 2304

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (2304)

<223>

<400> 43

| | |
|---|-----|
| atg gat ata aca gat aat agt tat gaa tat tcg aca ata aac cca caa | 48 |
| Met Asp Ile Thr Asp Asn Ser Tyr Glu Tyr Ser Thr Ile Asn Pro Gln | |
| 1 5 10 15 | |
| ggt ata ttt tta ttt gat gaa aac aag aat gtt aaa aag aca ata ttt | 96 |
| Val Ile Phe Leu Phe Asp Glu Asn Lys Asn Val Lys Lys Thr Ile Phe | |
| 20 25 30 | |
| tta tct aaa gat agt ata ata gat aat agt ttt gca tat gga gta tat | 144 |
| Leu Ser Lys Asp Ser Ile Ile Asp Asn Ser Phe Ala Tyr Gly Val Tyr | |
| 35 40 45 | |
| aat tat tta tta tct aca aat aca aaa ttt cta tca caa cca gaa tat | 192 |
| Asn Tyr Leu Leu Ser Thr Asn Thr Lys Phe Leu Ser Gln Pro Glu Tyr | |
| 50 55 60 | |
| att aat gat cat gtt ata tta tca ttc aat ctt gaa caa gct aga gga | 240 |
| Ile Asn Asp His Val Ile Leu Ser Phe Asn Leu Glu Gln Ala Arg Gly | |
| 65 70 75 80 | |
| tac att aga aat ata tta aga att aac gaa aat att att tta ttt tca | 288 |
| Tyr Ile Arg Asn Ile Leu Arg Ile Asn Glu Asn Ile Ile Leu Phe Ser | |
| 85 90 95 | |
| ata tgg cat aat tta gat tat tat tat aat aac aat gaa ata ttt gat | 336 |
| Ile Trp His Asn Leu Asp Tyr Tyr Tyr Asn Asn Asn Glu Ile Phe Asp | |
| 100 105 110 | |
| cca tat aat ata aaa aat aat tta tta ata gaa tct aat gat aat aaa | 384 |
| Pro Tyr Asn Ile Lys Asn Asn Leu Leu Ile Glu Ser Asn Asp Asn Lys | |
| 115 120 125 | |
| aaa ata tta tat atg tta gat att agt att act aat ggt gct ata ttt | 432 |
| Lys Ile Leu Tyr Met Leu Asp Ile Ser Ile Thr Asn Gly Ala Ile Phe | |
| 130 135 140 | |
| tgt gtt act act aac agt tat act aat aca aat tta gct aaa gaa ggc | 480 |
| Cys Val Thr Thr Asn Ser Tyr Thr Asn Thr Asn Leu Ala Lys Glu Gly | |
| 145 150 155 160 | |
| ata tat tca aaa att tat aca gaa tat ata caa gaa ata ata ttt aat | 528 |
| Ile Tyr Ser Lys Ile Tyr Thr Glu Tyr Ile Gln Glu Ile Ile Phe Asn | |
| 165 170 175 | |
| ata tat aaa aat aac tat aaa tta tct tcc gtt gta aaa gaa tca gaa | 576 |
| Ile Tyr Lys Asn Asn Tyr Lys Leu Ser Ser Val Val Lys Glu Ser Glu | |
| 180 185 190 | |
| gaa tat tct tta aca aat aat ttt gat gat ata atc aaa tta tca aat | 624 |
| Glu Tyr Ser Leu Thr Asn Asn Phe Asp Asp Ile Ile Lys Leu Ser Asn | |

| 195 | 200 | 205 | |
|---|-----|-----|------|
| att aat aaa tat aaa aag aca tta tgt att ggc gta tat gat aaa tat Ile Asn Lys Tyr Lys Lys Thr Leu Cys Ile Gly Val Tyr Asp Lys Tyr 210 215 220 | | | 672 |
| tat ata aag ggt gat aaa ata tca atc ttg gat aac tac aac gat tca Tyr Ile Lys Gly Asp Lys Ile Ser Ile Leu Asp Asn Tyr Asn Asp Ser 225 230 235 240 | | | 720 |
| gaa tat aca tca tta tac ata tat ata gat caa aat aat ata ata aaa Glu Tyr Thr Ser Leu Tyr Ile Tyr Ile Asp Gln Asn Asn Ile Ile Lys 245 250 255 | | | 768 |
| atc act aat gat gta tta ata aca gaa aaa tta act tat ttt aca gat Ile Thr Asn Asp Val Leu Ile Thr Glu Lys Leu Thr Tyr Phe Thr Asp 260 265 270 | | | 816 |
| ata tta aaa gaa gaa gaa ata aaa aat ata att att aaa tca act agt Ile Leu Lys Glu Glu Glu Ile Lys Asn Ile Ile Ile Lys Ser Thr Ser 275 280 285 | | | 864 |
| cca aaa agt att ata tat ata tat ttt gat acg ttt tta gac tct aat Pro Lys Ser Ile Ile Tyr Ile Tyr Phe Asp Thr Phe Leu Asp Ser Asn 290 295 300 | | | 912 |
| ata aat ata caa tat gat ctt aaa ttt ttt cta aat gtt aca aac act Ile Asn Ile Gln Tyr Asp Leu Lys Phe Phe Leu Asn Val Thr Asn Thr 305 310 315 320 | | | 960 |
| aga aat ata ttt ata gat atg tct tat aaa att aat att atg aca tct Arg Asn Ile Phe Ile Asp Met Ser Tyr Lys Ile Asn Ile Met Thr Ser 325 330 335 | | | 1008 |
| aaa aat cac ata tca ttt aga tct ttt aac ata gat gta aat tta tgt Lys Asn His Ile Ser Phe Arg Ser Phe Asn Ile Asp Val Asn Leu Cys 340 345 350 | | | 1056 |
| aaa tat tta tcg tta ttg ata tta gga tat aat cat att ttt aat aaa Lys Tyr Leu Ser Leu Leu Ile Leu Gly Tyr Asn His Ile Phe Asn Lys 355 360 365 | | | 1104 |
| ata caa aaa cac gct aga ctt aaa aaa att gat gag ctt tat cct tcg Ile Gln Lys His Ala Arg Leu Lys Lys Ile Asp Glu Leu Tyr Pro Ser 370 375 380 | | | 1152 |
| agg tat tgt caa aat tat aaa gat gtt aaa aga caa cct gtt tta ata Arg Tyr Cys Gln Asn Tyr Lys Asp Val Lys Arg Gln Pro Val Leu Ile 385 390 395 400 | | | 1200 |
| gat tcg ata gat gaa aat tat tta att aaa ata tct gat aaa tat tat Asp Ser Ile Asp Glu Asn Tyr Leu Ile Lys Ile Ser Asp Lys Tyr Tyr 405 410 415 | | | 1248 |
| gtg ggt aaa gaa gat act aca agg aca tat caa cac aaa gga act aaa Val Gly Lys Glu Asp Thr Thr Arg Thr Tyr Gln His Lys Gly Thr Lys 420 425 430 | | | 1296 |

| | |
|---|------|
| aaa ata ttt gat cca tac aaa tac ggt gat gtt tat ata gat gat aat | 1344 |
| Lys Ile Phe Asp Pro Tyr Lys Tyr Gly Asp Val Tyr Ile Asp Asp Asn | |
| 435 440 445 | |
| ggt tta ata tat caa tgt tct agt att tat tat tca aat atg gga ttt | 1392 |
| Gly Leu Ile Tyr Gln Cys Ser Ser Ile Tyr Tyr Ser Asn Met Gly Phe | |
| 450 455 460 | |
| ttg aat aat ata tat tta gct agt gga gga aaa act tgt tat cct tgt | 1440 |
| Leu Asn Asn Ile Tyr Leu Ala Ser Gly Gly Lys Thr Cys Tyr Pro Cys | |
| 465 470 475 480 | |
| tgt tat tca aaa cag aaa aat aga gat gaa ata ttc gaa tct tgc gtt | 1488 |
| Cys Tyr Ser Lys Gln Lys Asn Arg Asp Glu Ile Phe Glu Ser Cys Val | |
| 485 490 495 | |
| tat aat aaa gaa att att tta gaa gat aaa ata aat ccc ata ata gtt | 1536 |
| Tyr Asn Lys Glu Ile Ile Leu Glu Asp Lys Ile Asn Pro Ile Ile Val | |
| 500 505 510 | |
| aat tat gga aga att ata tta agt aag aat ggt tta tct aaa tta tca | 1584 |
| Asn Tyr Gly Arg Ile Ile Leu Ser Lys Asn Gly Leu Ser Lys Leu Ser | |
| 515 520 525 | |
| cct aaa tta aat aat att tta aac gct aat tca aaa ata gat att gtt | 1632 |
| Pro Lys Leu Asn Asn Ile Leu Asn Ala Asn Ser Lys Ile Asp Ile Val | |
| 530 535 540 | |
| aaa cat act aat aga ata gat ttt tca gat aat tat aca ata ata atg | 1680 |
| Lys His Thr Asn Arg Ile Asp Phe Ser Asp Asn Tyr Thr Ile Ile Met | |
| 545 550 555 560 | |
| tca tat caa cca act att act ata aga aat ttt gat gac atg tat tat | 1728 |
| Ser Tyr Gln Pro Thr Ile Thr Ile Arg Asn Phe Asp Asp Met Tyr Tyr | |
| 565 570 575 | |
| ttt att ata aac aat aat gct att gtt att aat gat aat ata gtt tat | 1776 |
| Phe Ile Ile Asn Asn Asn Ala Ile Val Ile Asn Asp Asn Ile Val Tyr | |
| 580 585 590 | |
| act gat aaa agt ata tta aaa atg aat aat aat aat ata aat gta ttt | 1824 |
| Thr Asp Lys Ser Ile Leu Lys Met Asn Asn Asn Asn Ile Asn Val Phe | |
| 595 600 605 | |
| ata ata ata caa aat aga att cat caa tta aaa aat att gat aaa caa | 1872 |
| Ile Ile Ile Gln Asn Arg Ile His Gln Leu Lys Asn Ile Asp Lys Gln | |
| 610 615 620 | |
| tca aaa tat gat gat ata gta gtt aat aaa ata gat gat aaa aaa ata | 1920 |
| Ser Lys Tyr Asp Asp Ile Val Val Asn Lys Ile Asp Asp Lys Lys Ile | |
| 625 630 635 640 | |
| aaa ata att aaa aaa tac ttt aat ata ata tcc aat ata cga aat cca | 1968 |
| Lys Ile Ile Lys Lys Tyr Phe Asn Ile Ile Ser Asn Ile Arg Asn Pro | |
| 645 650 655 | |

| | |
|---|------|
| ata tct aat aat gga att tct ata aca gat gat gtt tgt act ata gat | 2016 |
| Ile Ser Asn Asn Gly Ile Ser Ile Thr Asp Asp Val Cys Thr Ile Asp | |
| 660 665 670 | |

| | |
|---|------|
| ggc gaa tta ata gaa aat aaa aat att aaa tat ttt tct gaa tat aat | 2064 |
| Gly Glu Leu Ile Glu Asn Lys Asn Ile Lys Tyr Phe Ser Glu Tyr Asn | |
| 675 680 685 | |

| | |
|---|------|
| aat att tct tta aaa cct aaa agt act agc gaa tat ata gaa aag tat | 2112 |
| Asn Ile Ser Leu Lys Pro Lys Ser Thr Ser Glu Tyr Ile Glu Lys Tyr | |
| 690 695 700 | |

| | |
|---|------|
| ttt aaa caa tat ttt gat act ata tat act aat aat att aga tta ttt | 2160 |
| Phe Lys Gln Tyr Phe Asp Thr Ile Tyr Thr Asn Asn Ile Arg Leu Phe | |
| 705 710 715 720 | |

| | |
|---|------|
| ata aaa ata ttt ata acg aaa ata atg cat agt ata aaa gaa aca gac | 2208 |
| Ile Lys Ile Phe Ile Thr Lys Ile Met His Ser Ile Lys Glu Thr Asp | |
| 725 730 735 | |

| | |
|---|------|
| att ata aaa aca gat tat act aaa tta gaa gaa aaa tta aat aat att | 2256 |
| Ile Ile Lys Thr Asp Tyr Thr Lys Leu Glu Glu Lys Leu Asn Asn Ile | |
| 740 745 750 | |

| | |
|---|------|
| act aat aaa caa atg tca tct gtt ata ttg tca aaa aaa agt att taa | 2304 |
| Thr Asn Lys Gln Met Ser Ser Val Ile Leu Ser Lys Lys Ser Ile | |
| 755 760 765 | |

<210> 44

<211> 318

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (318)

<223>

| | |
|---|----|
| <400> 44 | |
| atg tta cca aaa tat tgg gga aga gga gcg tgg gtt gtt att ttt aca | 48 |
| Met Leu Pro Lys Tyr Trp Gly Arg Gly Ala Trp Val Val Ile Phe Thr | |
| 1 5 10 15 | |

| | |
|---|----|
| aga ata tat tat aca att tct act tta aat aaa gaa aat tat ata cat | 96 |
| Arg Ile Tyr Tyr Thr Ile Ser Thr Leu Asn Lys Glu Asn Tyr Ile His | |
| 20 25 30 | |

aat gtt gaa aaa tta aaa tta ata tta tat ttg ata tgt agt aca tta 144
 Asn Val Glu Lys Leu Lys Leu Ile Leu Tyr Leu Ile Cys Ser Thr Leu
 35 40 45

cca tgc gaa aca tgt gca gct gaa gct aaa aaa aaa ata caa aaa aat 192
 Pro Cys Glu Thr Cys Ala Ala Glu Ala Lys Lys Lys Ile Gln Lys Asn
 50 55 60

aat ata atg tct gaa tta aat att aat aga att tta cat ttt tat ata 240
 Asn Ile Met Ser Glu Leu Asn Ile Asn Arg Ile Leu His Phe Tyr Ile
 65 70 75 80

gaa ttt tat aat ata ttt cat aat aat aaa ata gat aga aaa aaa ata 288
 Glu Phe Tyr Asn Ile Phe His Asn Asn Lys Ile Asp Arg Lys Lys Ile
 85 90 95

aaa aca tat gat act ttt aac tat gta taa 318
 Lys Thr Tyr Asp Thr Phe Asn Tyr Val
 100 105

<210> 45

<211> 1703

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (1703)

<223>

<400> 45
 atg aaa aga acg ttt ata cca ttt agt aaa act aat ata gat tca gat 48
 Met Lys Arg Thr Phe Ile Pro Phe Ser Lys Thr Asn Ile Asp Ser Asp
 1 5 10 15

agg cct aat att tat ata aca gaa act aaa aat ggt aaa tat aac ata 96
 Arg Pro Asn Ile Tyr Ile Thr Glu Thr Lys Asn Gly Lys Tyr Asn Ile
 20 25 30

cca caa tat gta tca agt cct tgt acg ttt caa gat ggt tat gca gta 144
 Pro Gln Tyr Val Ser Ser Pro Cys Thr Phe Gln Asp Gly Tyr Ala Val
 35 40 45

gct tct ata aca gat att aaa tta gaa ggc tgt aat aat ttt gga tta 192
 Ala Ser Ile Thr Asp Ile Lys Leu Glu Gly Cys Asn Asn Phe Gly Leu

| 50 | 55 | 60 | |
|---|-----|-----|-----|
| aat ata act ttg cct gaa ata aaa ggt ata ggt ggt gtt agg ttt cag | | | 240 |
| Asn Ile Thr Leu Pro Glu Ile Lys Gly Ile Gly Gly Val Arg Phe Gln | | | |
| 65 | 70 | 75 | 80 |
| aat tat ttc att cct aaa ctt atc gaa gaa tgt att ata gaa act atc | | | 288 |
| Asn Tyr Phe Ile Pro Lys Leu Ile Glu Glu Cys Ile Ile Glu Thr Ile | | | |
| | 85 | 90 | 95 |
| gat gat aat aaa act aac gaa ata att aga aaa act ggg ctt gaa ttt | | | 336 |
| Asp Asp Asn Lys Thr Asn Glu Ile Ile Arg Lys Thr Gly Leu Glu Phe | | | |
| | 100 | 105 | 110 |
| tta atg gat ttt ata cag aag aaa aaa gaa tat tcg aga ttt gta ggc | | | 384 |
| Leu Met Asp Phe Ile Gln Lys Lys Lys Glu Tyr Ser Arg Phe Val Gly | | | |
| | 115 | 120 | 125 |
| aat aat tct gat tta tgt aaa ttt aaa tat ggt aaa gtg ctg atg ata | | | 432 |
| Asn Asn Ser Asp Leu Cys Lys Phe Lys Tyr Gly Lys Val Leu Met Ile | | | |
| | 130 | 135 | 140 |
| tta ttt ttc cat cta aag aag tat att ttc ctc taa tgt tta tat ttg | | | 480 |
| Leu Phe Phe His Leu Lys Lys Tyr Ile Phe Leu Cys Leu Tyr Leu | | | |
| 145 | 150 | 155 | |
| ata atg tta ata tga atc cca gaa ctt gtt tta gat tat tcc ctg aaa | | | 528 |
| Ile Met Leu Ile Ile Pro Glu Leu Val Leu Asp Tyr Ser Leu Lys | | | |
| 160 | 165 | 170 | |
| cta aat tac aaa taa aaa taa aat tta gac cat ttg cag ata ttt tat | | | 576 |
| Leu Asn Tyr Lys Lys Asn Leu Asp His Leu Gln Ile Phe Tyr | | | |
| 175 | 180 | 185 | |
| tac ccg atg taa aat ata aga aaa ata gtc tta aaa ata ttt cag atg | | | 624 |
| Tyr Pro Met Asn Ile Arg Lys Ile Val Leu Lys Ile Phe Gln Met | | | |
| 190 | 195 | 200 | |
| ttg atc tac aac cat ata taa aat tta ctg gtt ata ata cgt gcg gaa | | | 672 |
| Leu Ile Tyr Asn His Ile Asn Leu Leu Val Ile Ile Arg Ala Glu | | | |
| 205 | 210 | 215 | |
| gtc ctt tta aac ata gat ata tag aag aat taa ctt att cta cac aca | | | 720 |
| Val Leu Leu Asn Ile Asp Ile Lys Asn Leu Ile Leu His Thr | | | |
| 220 | 225 | 230 | |
| aaa gta ata aaa aga att att att cac ctg aat ttt tat cta taa cta | | | 768 |
| Lys Val Ile Lys Arg Ile Ile Ile His Leu Asn Phe Tyr Leu Leu | | | |
| 235 | 240 | 245 | |
| atc tat tat ggt att cta aat ctg ata ttt tca gag gaa ata tgt tta | | | 816 |
| Ile Tyr Tyr Gly Ile Leu Asn Leu Ile Phe Ser Glu Glu Ile Cys Leu | | | |
| 250 | 255 | 260 | |
| tat cat atc ccg att atc cag aaa cag aag aaa att tta tca aaa cat | | | 864 |
| Tyr His Ile Pro Ile Ile Gln Lys Gln Lys Lys Ile Leu Ser Lys His | | | |
| 265 | 270 | 275 | |

| | |
|---|------|
| acg ttg ata aat tat taa aag atc ttt taa tta ttt ctg atg atg aaa | 912 |
| Thr Leu Ile Asn Tyr Lys Ile Phe Leu Phe Leu Met Met Lys | |
| 280 285 290 | |
| act tta tta aat caa aag gat tta gtg ata aat gta agt tta aaa aaa | 960 |
| Thr Leu Leu Asn Gln Lys Asp Leu Val Ile Asn Val Ser Leu Lys Lys | |
| 295 300 305 | |
| ttg atc cgt gtg ata aaa ttg tgt ttg atg tta ata ata att gtg aaa | 1008 |
| Leu Ile Arg Val Ile Lys Leu Cys Leu Met Leu Ile Ile Ile Val Lys | |
| 310 315 320 325 | |
| tta ata taa tga atg tcc cgg aag gtt ttg att tat att atc ata caa | 1056 |
| Leu Ile Met Ser Arg Lys Val Leu Ile Tyr Ile Ile Ile Gln | |
| 330 335 | |
| ata tat tat cat tca gta gaa gaa ata acc caa atg att ata ata ttt | 1104 |
| Ile Tyr Tyr His Ser Val Glu Glu Ile Thr Gln Met Ile Ile Ile Phe | |
| 340 345 350 355 | |
| cta aaa aat tta gta aaa tat ctg gaa cat ata tac cta acg aag ata | 1152 |
| Leu Lys Asn Leu Val Lys Tyr Leu Glu His Ile Tyr Leu Thr Lys Ile | |
| 360 365 370 | |
| aga ttt taa tac acg aag taa aac ata caa taa aca tat ctg acg tta | 1200 |
| Arg Phe Tyr Thr Lys Asn Ile Gln Thr Tyr Leu Thr Leu | |
| 375 380 | |
| gta ttc cat tga gta tat gga atg caa atg aga ata ctt cta cgg gtg | 1248 |
| Val Phe His Val Tyr Gly Met Gln Met Arg Ile Leu Leu Arg Val | |
| 385 390 395 | |
| att tga gat cta tta aat cta aaa aat cag ata tat atg taa atg atc | 1296 |
| Ile Asp Leu Leu Asn Leu Lys Asn Gln Ile Tyr Met Met Ile | |
| 400 405 410 | |
| ctt ttg ttt ttg gat tag att ttt tat caa aag aat tag gaa tta tta | 1344 |
| Leu Leu Phe Leu Asp Ile Phe Tyr Gln Lys Asn Glu Leu Leu | |
| 415 420 425 | |
| gca gat cta taa caa gta gtt cta atg aat caa tag ctg aat ata aca | 1392 |
| Ala Asp Leu Gln Val Val Leu Met Asn Gln Leu Asn Ile Thr | |
| 430 435 440 | |
| gtg ata ccg taa ata ttg aat cat att ttc aat ctg ata att tat ttg | 1440 |
| Val Ile Pro Ile Leu Asn His Ile Phe Asn Leu Ile Ile Tyr Leu | |
| 445 450 455 | |
| cag tta cgc caa cat cag aat att caa acc cag caa tat ttt tac ata | 1488 |
| Gln Leu Arg Gln His Gln Asn Ile Gln Thr Gln Gln Tyr Phe Tyr Ile | |
| 460 465 470 | |
| gat tta atc ttc ata ata taa ttt tta ttg aac cat cta gat taa tag | 1536 |
| Asp Leu Ile Phe Ile Ile Phe Leu Leu Asn His Leu Asp | |
| 475 480 485 | |

ccg atg ctg cta aaa att tta gat gcg tta att taa gta tag att gga 1584
 Pro Met Leu Leu Lys Ile Leu Asp Ala Leu Ile Val Ile Gly
 490 495

aag aat ttc ctg aag tag atc caa gaa gtt tat tta aca aag aat tac 1632
 Lys Asn Phe Leu Lys Ile Gln Glu Val Tyr Leu Thr Lys Asn Tyr
 500 505 510

aaa ttt gtc aaa cta ttg tta aaa aaa tat cat atg ata ata ata tta 1680
 Lys Phe Val Lys Leu Leu Leu Lys Lys Tyr His Met Ile Ile Ile Leu
 515 520 525 530

taa ccg ttc ata ttc tag agt aa 1703
 Pro Phe Ile Phe Ser
 535

<210> 46

<211> 2619

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (2619)

<223>

<400> 46
 atg tct atc gac gtt tct gat att att aat gat tgt ata aaa ttt tat 48
 Met Ser Ile Asp Val Ser Asp Ile Ile Asn Asp Cys Ile Lys Phe Tyr
 1 5 10 15

agt aat att aat ttt gat agt aat cca aat gtt aat aat gaa ata gaa 96
 Ser Asn Ile Asn Phe Asp Ser Asn Pro Asn Val Asn Asn Glu Ile Glu
 20 25 30

ttt aca tac ata aat cca gat tta aga att tta tct aat att tat act 144
 Phe Thr Tyr Ile Asn Pro Asp Leu Arg Ile Leu Ser Asn Ile Tyr Thr
 35 40 45

gat aat aat gaa tct aaa aaa aaa aca tat tta gaa tat gta ctt aaa 192
 Asp Asn Asn Glu Ser Lys Lys Lys Thr Tyr Leu Glu Tyr Val Leu Lys
 50 55 60

ttt gct aac aaa aag tct aaa tta aga caa aaa tat aaa tat gat tat 240
 Phe Ala Asn Lys Lys Ser Lys Leu Arg Gln Lys Tyr Lys Tyr Asp Tyr
 65 70 75 80

| | |
|---|-----|
| cct act ttt gaa ata gca aat tca tat ttt tta gat aaa ctt act aat | 288 |
| Pro Thr Phe Glu Ile Ala Asn Ser Tyr Phe Leu Asp Lys Leu Thr Asn | |
| 85 90 95 | |
| aat tgg gaa aga aaa act ata ata tca gaa gat aaa ata aat att aat | 336 |
| Asn Trp Glu Arg Lys Thr Ile Ile Ser Glu Asp Lys Ile Asn Ile Asn | |
| 100 105 110 | |
| aaa aat gaa tat att tta ttg aga cat aat act gaa tat caa gat aat | 384 |
| Lys Asn Glu Tyr Ile Leu Leu Arg His Asn Thr Glu Tyr Gln Asp Asn | |
| 115 120 125 | |
| gat ata gaa tta ccg tta tta aat gat ata ttg gat aaa ata aat gta | 432 |
| Asp Ile Glu Leu Pro Leu Leu Asn Asp Ile Leu Asp Lys Ile Asn Val | |
| 130 135 140 | |
| tta ttt gtt tcg caa tta tat ata att ata aat gat tta ata aaa gtt | 480 |
| Leu Phe Val Ser Gln Leu Tyr Ile Ile Ile Asn Asp Leu Ile Lys Val | |
| 145 150 155 160 | |
| gaa ttt aaa ata aaa tca aac att gga cca tta tcg tca aat aaa tta | 528 |
| Glu Phe Lys Ile Lys Ser Asn Ile Gly Pro Leu Ser Ser Asn Lys Leu | |
| 165 170 175 | |
| tta tta agt aca cat ttc aat gat ata gaa aca tat aga aaa aat ata | 576 |
| Leu Leu Ser Thr His Phe Asn Asp Ile Glu Thr Tyr Arg Lys Asn Ile | |
| 180 185 190 | |
| aca tat tat tta gaa ata gaa gta cta tct aaa aca aaa ttg gat aat | 624 |
| Thr Tyr Tyr Leu Glu Ile Glu Val Leu Ser Lys Thr Lys Leu Asp Asn | |
| 195 200 205 | |
| aat gta ctt tat gat aat tta gta aaa tct ttt gaa tat ata tat aaa | 672 |
| Asn Val Leu Tyr Asp Asn Leu Val Lys Ser Phe Glu Tyr Ile Tyr Lys | |
| 210 215 220 | |
| agc aaa aat ata tct aat ata agt tta gtt aca ata aaa aat aaa cct | 720 |
| Ser Lys Asn Ile Ser Asn Ile Ser Leu Val Thr Ile Lys Asn Lys Pro | |
| 225 230 235 240 | |
| aaa ata aaa aca cat atg ata caa tat aat aaa tta aat aca att gat | 768 |
| Lys Ile Lys Thr His Met Ile Gln Tyr Asn Lys Leu Asn Thr Ile Asp | |
| 245 250 255 | |
| aaa gaa tca tat att atg gct att aaa att gat gga gat gtt gta gaa | 816 |
| Lys Glu Ser Tyr Ile Met Ala Ile Lys Ile Asp Gly Asp Val Val Glu | |
| 260 265 270 | |
| ttt aat gtt atg aat gga att tgt aat atc ata ata tat gat atg gta | 864 |
| Phe Asn Val Met Asn Gly Ile Cys Asn Ile Ile Ile Tyr Asp Met Val | |
| 275 280 285 | |
| tat aaa aat ttt tca tgt aac ata gat aaa aat ata caa atg ata ggt | 912 |
| Tyr Lys Asn Phe Ser Cys Asn Ile Asp Lys Asn Ile Gln Met Ile Gly | |
| 290 295 300 | |

| | |
|---|------|
| atg gga gaa tac att aag gta gat aat gtt aaa aaa ata tat cca ttt | 960 |
| Met Gly Glu Tyr Ile Lys Val Asp Asn Val Lys Lys Ile Tyr Pro Phe | |
| 305 310 315 320 | |
| tat ttt tca aaa tta tct tat aat aat aaa aaa ata ata aat aat att | 1008 |
| Tyr Phe Ser Lys Leu Ser Tyr Asn Asn Lys Lys Ile Ile Asn Asn Ile | |
| 325 330 335 | |
| cta gat aga tat aag caa ata caa tat tat aat gat aat tta ttg tgt | 1056 |
| Leu Asp Arg Tyr Lys Gln Ile Gln Tyr Tyr Asn Asp Asn Leu Leu Cys | |
| 340 345 350 | |
| cat aaa cca aat atg caa att aaa ttt gaa aac aaa tta act tta aaa | 1104 |
| His Lys Pro Asn Met Gln Ile Lys Phe Glu Asn Lys Leu Thr Leu Lys | |
| 355 360 365 | |
| ttt gac gaa aat aac gta act aca aat gta cta aaa ttt tat aaa tca | 1152 |
| Phe Asp Glu Asn Asn Val Thr Thr Asn Val Leu Lys Phe Tyr Lys Ser | |
| 370 375 380 | |
| ata gaa aat agt tca ttt aaa aat ata tac gat ggt att gta tta cta | 1200 |
| Ile Glu Asn Ser Ser Phe Lys Asn Ile Tyr Asp Gly Ile Val Leu Leu | |
| 385 390 395 400 | |
| gat att aca gat aat gat tct aaa aaa gat tat aaa ttt aaa ata gat | 1248 |
| Asp Ile Thr Asp Asn Asp Ser Lys Lys Asp Tyr Lys Phe Lys Ile Asp | |
| 405 410 415 | |
| aat act gta gat gtt ata tgt aaa ttg gac act tat aga gga aca tat | 1296 |
| Asn Thr Val Asp Val Ile Cys Lys Leu Asp Thr Tyr Arg Gly Thr Tyr | |
| 420 425 430 | |
| ata tta cac aat gat aat aaa tta tat ata act ttt aca tta tat caa | 1344 |
| Ile Leu His Asn Asp Asn Lys Leu Tyr Ile Thr Phe Thr Leu Tyr Gln | |
| 435 440 445 | |
| tat gat aat aaa aat ttt aca gaa att tta aaa tac gaa gaa aag aac | 1392 |
| Tyr Asp Asn Lys Asn Phe Thr Glu Ile Leu Lys Tyr Glu Glu Lys Asn | |
| 450 455 460 | |
| gaa att ata gaa tat aat aat tat gtt aac tta tta att ttt aat aat | 1440 |
| Glu Ile Ile Glu Tyr Asn Asn Tyr Val Asn Leu Leu Ile Phe Asn Asn | |
| 465 470 475 480 | |
| aat aat aaa ttt ggt cct aaa aaa atg tta tcg ccc ata tgg tgt att | 1488 |
| Asn Asn Lys Phe Gly Pro Lys Lys Met Leu Ser Pro Ile Trp Cys Ile | |
| 485 490 495 | |
| gta gaa tat tca ttt tta gaa tct aaa att att gga tta aga atc gat | 1536 |
| Val Glu Tyr Ser Phe Leu Glu Ser Lys Ile Ile Gly Leu Arg Ile Asp | |
| 500 505 510 | |
| aaa act aat aat ttc tat aga caa aat tat aat ggc aat aat cta gat | 1584 |
| Lys Thr Asn Asn Phe Tyr Arg Gln Asn Tyr Asn Gly Asn Asn Leu Asp | |
| 515 520 525 | |
| gtt ata tta aca tcc aaa cac att cac gaa gaa ttt cca tca aat tat | 1632 |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Val | Ile | Leu | Thr | Ser | Lys | His | Ile | His | Glu | Glu | Phe | Pro | Ser | Asn | Tyr | |
| 530 | | | | | | 535 | | | | | 540 | | | | | |
| aat | att | gat | tat | tta | atg | tct | tta | aat | gaa | act | ata | aat | gta | ata | gat | 1680 |
| Asn | Ile | Asp | Tyr | Leu | Met | Ser | Leu | Asn | Glu | Thr | Ile | Asn | Val | Ile | Asp | |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 | |
| aat | aat | cca | cac | aga | tcc | aaa | tta | tta | tta | aat | aaa | gaa | gtt | aat | aaa | 1728 |
| Asn | Asn | Pro | His | Arg | Ser | Lys | Leu | Leu | Leu | Asn | Lys | Glu | Val | Asn | Lys | |
| | | | | 565 | | | | | 570 | | | | | 575 | | |
| tat | ttt | atg | aat | aat | act | att | aga | aca | tct | ata | aat | ata | tta | aca | aat | 1776 |
| Tyr | Phe | Met | Asn | Asn | Thr | Ile | Arg | Thr | Ser | Ile | Asn | Ile | Leu | Thr | Asn | |
| | | | 580 | | | | | 585 | | | | | 590 | | | |
| tat | tta | aaa | act | aat | ggg | ata | tcg | atg | gct | ata | tca | aaa | tta | gta | aca | 1824 |
| Tyr | Leu | Lys | Thr | Asn | Gly | Ile | Ser | Met | Ala | Ile | Ser | Lys | Leu | Val | Thr | |
| | | 595 | | | | | 600 | | | | | 605 | | | | |
| act | tta | cca | aat | aga | tat | gtt | tta | agt | ata | gat | ata | gga | aga | gga | gga | 1872 |
| Thr | Leu | Pro | Asn | Arg | Tyr | Val | Leu | Ser | Ile | Asp | Ile | Gly | Arg | Gly | Gly | |
| | 610 | | | | | 615 | | | | | 620 | | | | | |
| gat | tta | act | aaa | tat | tat | tat | gtc | gga | ata | aca | gga | atg | tta | gga | aca | 1920 |
| Asp | Leu | Thr | Lys | Tyr | Tyr | Tyr | Val | Gly | Ile | Thr | Gly | Met | Leu | Gly | Thr | |
| 625 | | | | | 630 | | | | | 635 | | | | | 640 | |
| gat | cct | gat | att | ttt | gct | ata | aaa | gaa | gca | aga | gat | aga | tat | aaa | aaa | 1968 |
| Asp | Pro | Asp | Ile | Phe | Ala | Ile | Lys | Glu | Ala | Arg | Asp | Arg | Tyr | Lys | Lys | |
| | | | | 645 | | | | | 650 | | | | | 655 | | |
| tta | caa | act | ata | tca | aat | gcc | caa | gct | agt | ata | tat | aaa | ttt | gat | agt | 2016 |
| Leu | Gln | Thr | Ile | Ser | Asn | Ala | Gln | Ala | Ser | Ile | Tyr | Lys | Phe | Asp | Ser | |
| | | | 660 | | | | | 665 | | | | | 670 | | | |
| ttg | aac | atg | tct | ata | tta | aat | gat | aat | tat | gaa | aat | gaa | ata | aaa | aat | 2064 |
| Leu | Asn | Met | Ser | Ile | Leu | Asn | Asp | Asn | Tyr | Glu | Asn | Glu | Ile | Lys | Asn | |
| | | 675 | | | | | 680 | | | | | 685 | | | | |
| aaa | ttt | atg | aca | cat | cac | aaa | ata | caa | tat | ttt | gga | gtt | ata | gag | tg | 2112 |
| Lys | Phe | Met | Thr | His | His | Lys | Ile | Gln | Tyr | Phe | Gly | Val | Ile | Glu | Trp | |
| | 690 | | | | | 695 | | | | | 700 | | | | | |
| caa | tta | gct | att | cat | tat | tct | tac | aat | aac | aat | aca | aaa | gat | atg | ata | 2160 |
| Gln | Leu | Ala | Ile | His | Tyr | Ser | Tyr | Asn | Asn | Asn | Thr | Lys | Asp | Met | Ile | |
| 705 | | | | | 710 | | | | | 715 | | | | | 720 | |
| tta | tta | aaa | cta | aaa | aat | tta | tca | aac | gat | gga | aca | aaa | gta | ata | ata | 2208 |
| Leu | Leu | Lys | Leu | Lys | Asn | Leu | Ser | Asn | Asp | Gly | Thr | Lys | Val | Ile | Ile | |
| | | | | 725 | | | | | 730 | | | | | 735 | | |
| act | tgt | ctt | gac | gga | gac | gaa | ata | aca | aat | aga | tta | aat | gaa | aat | cct | 2256 |
| Thr | Cys | Leu | Asp | Gly | Asp | Glu | Ile | Thr | Asn | Arg | Leu | Asn | Glu | Asn | Pro | |
| | | | 740 | | | | | 745 | | | | | 750 | | | |
| aat | tta | att | tat | aat | att | caa | ccc | gga | att | aca | tat | aaa | att | tct | aaa | 2304 |
| Asn | Leu | Ile | Tyr | Asn | Ile | Gln | Pro | Gly | Ile | Thr | Tyr | Lys | Ile | Ser | Lys | |

| 755 | 760 | 765 | |
|---|-----|-----|------|
| att tca gat gat aaa ata tca gtt tta tat aat gct aca atg act gaa | | | 2352 |
| Ile Ser Asp Asp Lys Ile Ser Val Leu Tyr Asn Ala Thr Met Thr Glu | | | |
| 770 | 775 | 780 | |
| tggtta gaa gaa tat ata ata aca gat aaa ata att gat gat ttt gct | | | 2400 |
| Trp Leu Glu Glu Tyr Ile Ile Thr Asp Lys Ile Ile Asp Asp Phe Ala | | | |
| 785 | 790 | 795 | 800 |
| atg tat aat ttt ata tta tca gat gtt tgt aaa ttt gat gat ata ttt | | | 2448 |
| Met Tyr Asn Phe Ile Leu Ser Asp Val Cys Lys Phe Asp Asp Ile Phe | | | |
| | 805 | 810 | 815 |
| aaa tat aat tct gat aaa tct gta gaa gtt tta tct aat ttt tta aga | | | 2496 |
| Lys Tyr Asn Ser Asp Lys Ser Val Glu Val Leu Ser Asn Phe Leu Arg | | | |
| | 820 | 825 | 830 |
| aaa tca act aaa aag ttt tat aat gat att aaa aat gat aaa aat ata | | | 2544 |
| Lys Ser Thr Lys Lys Phe Tyr Asn Asp Ile Lys Asn Asp Lys Asn Ile | | | |
| | 835 | 840 | 845 |
| tat aac aat gat gat att aaa aaa ata atg tcg tta ttt aaa gtt tat | | | 2592 |
| Tyr Asn Asn Asp Asp Ile Lys Lys Ile Met Ser Leu Phe Lys Val Tyr | | | |
| | 850 | 855 | 860 |
| act ttt gtt tat tca tct tgt aaa taa | | | 2619 |
| Thr Phe Val Tyr Ser Ser Cys Lys | | | |
| 865 | 870 | | |

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| atg aga aat aat aaa gaa aag tat atg aat cat ttt acg gat ttt ata | 48 |
| Met Arg Asn Asn Lys Glu Lys Tyr Met Asn His Phe Thr Asp Phe Ile | |
| 1 5 10 15 | |

| | |
|---|----|
| att cgt aat tta cca ttt aga aat tta att gat tcg atg aaa gaa aat | 96 |
|---|----|

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Ile | Arg | Asn | Leu | Pro | Phe | Arg | Asn | Leu | Ile | Asp | Ser | Met | Lys | Glu | Asn | | |
| | | 20 | | | | | | 25 | | | | | 30 | | | | |
| att | att | att | aat | aat | gaa | aca | tat | aaa | ata | gaa | gaa | tta | ttt | aaa | tat | 144 | |
| Ile | Ile | Ile | Asn | Asn | Glu | Thr | Tyr | Lys | Ile | Glu | Glu | Leu | Phe | Lys | Tyr | | |
| | | 35 | | | | | 40 | | | | | 45 | | | | | |
| att | tat | tat | cat | cca | cta | gat | tta | tta | aca | att | aga | gac | att | agt | aat | 192 | |
| Ile | Tyr | Tyr | His | Pro | Leu | Asp | Leu | Leu | Thr | Ile | Arg | Asp | Ile | Ser | Asn | | |
| | 50 | | | | | 55 | | | | | 60 | | | | | | |
| gca | gat | aga | aaa | gat | gaa | tat | gtt | aaa | caa | ttt | gta | aat | aat | tta | tat | 240 | |
| Ala | Asp | Arg | Lys | Asp | Glu | Tyr | Val | Lys | Gln | Phe | Val | Asn | Asn | Leu | Tyr | | |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | | | |
| ctt | aga | tat | gca | tat | aac | gaa | atg | gat | ttt | ata | aaa | aat | aat | ata | aga | 288 | |
| Leu | Arg | Tyr | Ala | Tyr | Asn | Glu | Met | Asp | Phe | Ile | Lys | Asn | Asn | Ile | Arg | | |
| | | | 85 | | | | | | 90 | | | | | 95 | | | |
| tat | gac | gat | aaa | gta | tat | tct | att | ata | aac | gaa | att | aat | tat | ttt | cca | 336 | |
| Tyr | Asp | Asp | Lys | Val | Tyr | Ser | Ile | Ile | Asn | Glu | Ile | Asn | Tyr | Phe | Pro | | |
| | | | 100 | | | | | 105 | | | | | 110 | | | | |
| gaa | cat | act | tcg | gaa | ttt | tta | aaa | tat | aga | tta | tca | cac | tat | gaa | tca | 384 | |
| Glu | His | Thr | Ser | Glu | Phe | Leu | Lys | Tyr | Arg | Leu | Ser | His | Tyr | Glu | Ser | | |
| | | 115 | | | | | 120 | | | | | 125 | | | | | |
| gaa | tca | aga | atc | aga | gga | gga | aga | gta | gta | act | ttt | agc | ggg | gtt | cct | 432 | |
| Glu | Ser | Arg | Ile | Arg | Gly | Gly | Arg | Val | Val | Thr | Phe | Ser | Gly | Val | Pro | | |
| | 130 | | | | | 135 | | | | | 140 | | | | | | |
| gat | aat | ggg | tat | ggg | tat | tta | tta | agt | caa | tca | gac | cct | tca | tct | aag | 480 | |
| Asp | Asn | Gly | Tyr | Gly | Tyr | Leu | Leu | Ser | Gln | Ser | Asp | Pro | Ser | Ser | Lys | | |
| 145 | | | | | 150 | | | | 155 | | | | | | 160 | | |
| tat | ata | tgg | gca | ata | gta | gat | aac | tat | tta | atg | att | gat | aat | gaa | gat | 528 | |
| Tyr | Ile | Trp | Ala | Ile | Val | Asp | Asn | Tyr | Leu | Met | Ile | Asp | Asn | Glu | Asp | | |
| | | | 165 | | | | | | 170 | | | | | 175 | | | |
| aaa | ttt | gat | ttt | tat | acc | caa | tat | att | cca | ttt | att | aat | tat | ttt | cta | 576 | |
| Lys | Phe | Asp | Phe | Tyr | Thr | Gln | Tyr | Ile | Pro | Phe | Ile | Asn | Tyr | Phe | Leu | | |
| | | | 180 | | | | | 185 | | | | | 190 | | | | |
| aaa | tta | tat | tat | aat | aac | atc | aca | aaa | aaa | tat | att | att | tta | gat | cct | 624 | |
| Lys | Leu | Tyr | Tyr | Asn | Asn | Ile | Thr | Lys | Lys | Tyr | Ile | Ile | Leu | Asp | Pro | | |
| | | 195 | | | | | 200 | | | | | 205 | | | | | |
| agt | aat | cct | gaa | gaa | aat | aaa | gat | gta | cct | aac | gct | aat | tta | atc | gac | 672 | |
| Ser | Asn | Pro | Glu | Glu | Asn | Lys | Asp | Val | Pro | Asn | Ala | Asn | Leu | Ile | Asp | | |
| | 210 | | | | | 215 | | | | | 220 | | | | | | |
| gaa | agt | tta | aaa | aat | aaa | tat | aat | aat | ttt | aca | aag | aaa | tta | tca | tat | 720 | |
| Glu | Ser | Leu | Lys | Asn | Lys | Tyr | Asn | Asn | Phe | Thr | Lys | Lys | Leu | Ser | Tyr | | |
| 225 | | | | | 230 | | | | 235 | | | | | | 240 | | |
| ttt | gat | ata | tca | aat | agt | aga | tat | aat | tct | ata | aat | gat | gtg | ggg | gat | 768 | |
| Phe | Asp | Ile | Ser | Asn | Ser | Arg | Tyr | Asn | Ser | Ile | Asn | Asp | Val | Gly | Asp | | |

| 245 | 250 | 255 | |
|---|-----|-----|------|
| ttt aat aat tat tta gat atc aat act aat aaa aat att att gaa aat Phe Asn Asn Tyr Leu Asp Ile Asn Thr Asn Lys Asn Ile Ile Glu Asn 260 265 270 | | | 816 |
| tat gat gta att att aat aat att ata aaa tca ata tat cta tat aac Tyr Asp Val Ile Ile Asn Asn Ile Ile Lys Ser Ile Tyr Leu Tyr Asn 275 280 285 | | | 864 |
| ata atg gat aca aat gta gaa gat ata tta aat ata ata atg aac gat Ile Met Asp Thr Asn Val Glu Asp Ile Leu Asn Ile Ile Met Asn Asp 290 295 300 | | | 912 |
| aca aat tat tta tta ttg aat gaa ata tat agt gaa tat tta cca aac Thr Asn Tyr Leu Leu Leu Asn Glu Ile Tyr Ser Glu Tyr Leu Pro Asn 305 310 315 320 | | | 960 |
| tca agc aaa tta tat gtt tta gtg gga tta cgt cgc att ata tat gaa Ser Ser Lys Leu Tyr Val Leu Val Gly Leu Arg Arg Ile Ile Tyr Glu 325 330 335 | | | 1008 |
| aaa agc aaa caa aat aaa aat att agc aat tta tat atg tta gat tca Lys Ser Lys Gln Asn Lys Asn Ile Ser Asn Leu Tyr Met Leu Asp Ser 340 345 350 | | | 1056 |
| ttt gta agt ata tta tta tat tta tta gaa aga tat tac gaa aat gat Phe Val Ser Ile Leu Leu Tyr Leu Leu Glu Arg Tyr Tyr Glu Asn Asp 355 360 365 | | | 1104 |
| ata acc aca ctt aat gaa tct aaa aga tta ata aaa caa tat tat aaa Ile Thr Thr Leu Asn Glu Ser Lys Arg Leu Ile Lys Gln Tyr Tyr Lys 370 375 380 | | | 1152 |
| gat aat tta aat tca aaa aat agc gtt aat ttg gat tct ata aat att Asp Asn Leu Asn Ser Lys Asn Ser Val Asn Leu Asp Ser Ile Asn Ile 385 390 395 400 | | | 1200 |
| att aaa gaa aat atc aat aat aat att att aat ata aca tta gat gaa Ile Lys Glu Asn Ile Asn Asn Asn Ile Ile Asn Ile Thr Leu Asp Glu 405 410 415 | | | 1248 |
| gat gaa caa tca aga tat aat tta ata ata gcc aca aac cca gaa ata Asp Glu Gln Ser Arg Tyr Asn Leu Ile Ile Ala Thr Asn Pro Glu Ile 420 425 430 | | | 1296 |
| ata gta aat tat gca agt aga aat tat ttt aac atc agt agt aac gaa Ile Val Asn Tyr Ala Ser Arg Asn Tyr Phe Asn Ile Ser Ser Asn Glu 435 440 445 | | | 1344 |
| gat aac aca tca aat gtg tat aaa aaa gca atg gca ttt ttc ata aat Asp Asn Thr Ser Asn Val Tyr Lys Lys Ala Met Ala Phe Phe Ile Asn 450 455 460 | | | 1392 |
| aat ttt att gaa aat aat ata act aac gaa aat ata ata aat aat tta Asn Phe Ile Glu Asn Asn Ile Thr Asn Glu Asn Ile Ile Asn Asn Leu 465 470 475 480 | | | 1440 |

| | |
|---|------|
| tca caa gtt tat act caa aat aca gat ttt att aat att act tat gat | 1488 |
| Ser Gln Val Tyr Thr Gln Asn Thr Asp Phe Ile Asn Ile Thr Tyr Asp | |
| 485 490 495 | |
| gat cta aat aat tta aaa ata aaa tat att aat aat tat aat ata aat | 1536 |
| Asp Leu Asn Asn Leu Lys Ile Lys Tyr Ile Asn Asn Tyr Asn Ile Asn | |
| 500 505 510 | |
| tta gat att aaa aaa att att aat gac aat cta gaa ata att aga att | 1584 |
| Leu Asp Ile Lys Lys Ile Ile Asn Asp Asn Leu Glu Ile Ile Arg Ile | |
| 515 520 525 | |
| tat aaa gat aat gtt tta tat gac act aat att aaa atg aat tat aaa | 1632 |
| Tyr Lys Asp Asn Val Leu Tyr Asp Thr Asn Ile Lys Met Asn Tyr Lys | |
| 530 535 540 | |
| tca ttt ata tca cta tta ccc acc ata tac tat att att ttt tat aat | 1680 |
| Ser Phe Ile Ser Leu Leu Pro Thr Ile Tyr Tyr Ile Ile Phe Tyr Asn | |
| 545 550 555 560 | |
| caa cct ata aat aga aaa ata tat aga aaa gct ata att caa gaa cct | 1728 |
| Gln Pro Ile Asn Arg Lys Ile Tyr Arg Lys Ala Ile Ile Gln Glu Pro | |
| 565 570 575 | |
| cca att gaa gaa gag atc tca act gaa act aca aaa aga gct aga aga | 1776 |
| Pro Ile Glu Glu Glu Ile Ser Thr Glu Thr Thr Lys Arg Ala Arg Arg | |
| 580 585 590 | |
| gtg aga ttt aat cca ttt aat gtc gaa gaa aca ata ata gaa ccc aag | 1824 |
| Val Arg Phe Asn Pro Phe Asn Val Glu Glu Thr Ile Ile Glu Pro Lys | |
| 595 600 605 | |
| agt gtt ttt gtt aat aaa agt aaa aat tat tta tat gat aca tta ttt | 1872 |
| Ser Val Phe Val Asn Lys Ser Lys Asn Tyr Leu Tyr Asp Thr Leu Phe | |
| 610 615 620 | |
| tgg tct ggc ata tct ata gat gat ttt aat aaa ttt cca tta tac att | 1920 |
| Trp Ser Gly Ile Ser Ile Asp Asp Phe Asn Lys Phe Pro Leu Tyr Ile | |
| 625 630 635 640 | |
| aaa act att atc ttg gat agt tgt ctt att tta gga aga caa ata aac | 1968 |
| Lys Thr Ile Ile Leu Asp Ser Cys Leu Ile Leu Gly Arg Gln Ile Asn | |
| 645 650 655 | |
| gat gat ggg tca tct act tgc gtt tta tat cat gat att aat aat aac | 2016 |
| Asp Asp Gly Ser Ser Thr Cys Val Leu Tyr His Asp Ile Asn Asn Asn | |
| 660 665 670 | |
| gat gtt aca aaa ata tgt ata ata cct tat cct tat aca gca aac aga | 2064 |
| Asp Val Thr Lys Ile Cys Ile Ile Pro Tyr Pro Tyr Thr Ala Asn Arg | |
| 675 680 685 | |
| act atg tat gat gtt ttt aaa caa gtt tca gat aaa tta aga tct atg | 2112 |
| Thr Met Tyr Asp Val Phe Lys Gln Val Ser Asp Lys Leu Arg Ser Met | |
| 690 695 700 | |

| | |
|---|------|
| tac tca tat cct gta aat tat aat ata aat aat aat gaa aaa cat tta | 2160 |
| Tyr Ser Tyr Pro Val Asn Tyr Asn Ile Asn Asn Asn Glu Lys His Leu | |
| 705 710 715 720 | |
| aat tta tca aaa aaa gga aat tat aaa ttt atg aat aaa cta gca gaa | 2208 |
| Asn Leu Ser Lys Lys Gly Asn Tyr Lys Phe Met Asn Lys Leu Ala Glu | |
| 725 730 735 | |
| tgt aaa gat att aaa gat tta ata caa ttt tat gtt atg gta aga gat | 2256 |
| Cys Lys Asp Ile Lys Asp Leu Ile Gln Phe Tyr Val Met Val Arg Asp | |
| 740 745 750 | |
| aca gat cca ggt cat tct gaa ata tca ata cca cca aac caa gaa tta | 2304 |
| Thr Asp Pro Gly His Ser Glu Ile Ser Ile Pro Pro Asn Gln Glu Leu | |
| 755 760 765 | |
| tat tta gca ata act tta tta gat tta ttg gga ttt tct cct act tta | 2352 |
| Tyr Leu Ala Ile Thr Leu Leu Asp Leu Leu Gly Phe Ser Pro Thr Leu | |
| 770 775 780 | |
| tca aga aga aat act agt att ggt ttt tca tat tac att caa aca gat | 2400 |
| Ser Arg Arg Asn Thr Ser Ile Gly Phe Ser Tyr Tyr Ile Gln Thr Asp | |
| 785 790 795 800 | |
| aga caa gta tct gct cgt aat ttg ata tat ata tta tca aga aac tac | 2448 |
| Arg Gln Val Ser Ala Arg Asn Leu Ile Tyr Ile Leu Ser Arg Asn Tyr | |
| 805 810 815 | |
| cca gat atg gta aaa agt aag gaa tta tca gat gta gta att aat ata | 2496 |
| Pro Asp Met Val Lys Ser Lys Glu Leu Ser Asp Val Val Ile Asn Ile | |
| 820 825 830 | |
| ttg tcg cca ata ctt gca tat tta aga tat gta tta aat tat tat aga | 2544 |
| Leu Ser Pro Ile Leu Ala Tyr Leu Arg Tyr Val Leu Asn Tyr Tyr Arg | |
| 835 840 845 | |
| aca aat aat aca aca tta aca gct gga tct aat aat gca ggt cat gat | 2592 |
| Thr Asn Asn Thr Thr Leu Thr Ala Gly Ser Asn Asn Ala Gly His Asp | |
| 850 855 860 | |
| tgt tgt att cct att aaa tca aat cct tta gat tta ctt att aat ata | 2640 |
| Cys Cys Ile Pro Ile Lys Ser Asn Pro Leu Asp Leu Leu Ile Asn Ile | |
| 865 870 875 880 | |
| gat aca tct ttt act gat tcc gac aat ata tta gat ata atg aat aga | 2688 |
| Asp Thr Ser Phe Thr Asp Ser Asp Asn Ile Leu Asp Ile Met Asn Arg | |
| 885 890 895 | |
| gat atg ttt aat ttg gat aat gat ata ttt aga caa gta ata caa aat | 2736 |
| Asp Met Phe Asn Leu Asp Asn Asp Ile Phe Arg Gln Val Ile Gln Asn | |
| 900 905 910 | |
| aat att tat agc gct ggt agc gtt gat att gtc gat att ata act gat | 2784 |
| Asn Ile Tyr Ser Ala Gly Ser Val Asp Ile Val Asp Ile Ile Thr Asp | |
| 915 920 925 | |
| aat att ccc caa aac att tat atg aaa aca aac ata att gat aaa atg | 2832 |

| | |
|---|------|
| Asn Ile Pro Gln Asn Ile Tyr Met Lys Thr Asn Ile Ile Asp Lys Met | |
| 930 935 940 | |
| tat gat aaa att ttt gct ggt gaa agt att agc gat ata ttg gat ata | 2880 |
| Tyr Asp Lys Ile Phe Ala Gly Glu Ser Ile Ser Asp Ile Leu Asp Ile | |
| 945 950 955 960 | |
| cag ttt gat gaa gat att aat gat aat ttt aat tac aat gat gta aat | 2928 |
| Gln Phe Asp Glu Asp Ile Asn Asp Asn Phe Asn Tyr Asn Asp Val Asn | |
| 965 970 975 | |
| atg att act aat gat tta atg aaa aaa cta aga aaa tta tta aaa aaa | 2976 |
| Met Ile Thr Asn Asp Leu Met Lys Lys Leu Arg Lys Leu Leu Lys Lys | |
| 980 985 990 | |
| aca act att aat aat tta gaa gac aat gct atg ata tta aag tca caa | 3024 |
| Thr Thr Ile Asn Asn Leu Glu Asp Asn Ala Met Ile Leu Lys Ser Gln | |
| 995 1000 1005 | |
| atg tta tca tct att aat aat gtt ttt aat cgt tat tct tgt atg | 3069 |
| Met Leu Ser Ser Ile Asn Asn Val Phe Asn Arg Tyr Ser Cys Met | |
| 1010 1015 1020 | |
| gaa aaa ata cca aca caa tat ctt ata aat att aga aca tta tta | 3114 |
| Glu Lys Ile Pro Thr Gln Tyr Leu Ile Asn Ile Arg Thr Leu Leu | |
| 1025 1030 1035 | |
| aaa caa tat agt aat gaa aat ata aaa att gac gaa gat tta aaa | 3159 |
| Lys Gln Tyr Ser Asn Glu Asn Ile Lys Ile Asp Glu Asp Leu Lys | |
| 1040 1045 1050 | |
| aat aat atc caa aca ata att agt aat atc cat agt aat act aaa | 3204 |
| Asn Asn Ile Gln Thr Ile Ile Ser Asn Ile His Ser Asn Thr Lys | |
| 1055 1060 1065 | |
| gat ata att aaa att att acc act tta agt gct ggt att gat tta | 3249 |
| Asp Ile Ile Lys Ile Ile Thr Thr Leu Ser Ala Gly Ile Asp Leu | |
| 1070 1075 1080 | |
| gtt aga gca tta aaa aga tct aat gca aat gta gaa aat aaa aca | 3294 |
| Val Arg Ala Leu Lys Arg Ser Asn Ala Asn Val Glu Asn Lys Thr | |
| 1085 1090 1095 | |
| ata aat ctt gaa ttt cta aaa aaa tta tgt gat att tgt aaa gat | 3339 |
| Ile Asn Leu Glu Phe Leu Lys Lys Leu Cys Asp Ile Cys Lys Asp | |
| 1100 1105 1110 | |
| agt ttt tat aaa tat aat aga aat aat gat ata gta tat aaa aat | 3384 |
| Ser Phe Tyr Lys Tyr Asn Arg Asn Asn Asp Ile Val Tyr Lys Asn | |
| 1115 1120 1125 | |
| tta cta aaa gat gta ttt aat aat gat aat gaa att aat aat gat | 3429 |
| Leu Leu Lys Asp Val Phe Asn Asn Asp Asn Glu Ile Asn Asn Asp | |
| 1130 1135 1140 | |
| agt gtg ttt gat aca tgt taa | 3450 |
| Ser Val Phe Asp Thr Cys | |

1145

<210> 48

<211> 2007

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

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<223>

<400> 48

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| atg aat gtt ttt gaa atg gat agt ata aat ata tct aat cgt aat tat | 48 |
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| 1 5 10 15 | |
| tta ata gca ggt gta aca tct gat aat att tgt aat tgt gtt aat gat | 96 |
| Leu Ile Ala Gly Val Thr Ser Asp Asn Ile Cys Asn Cys Val Asn Asp | |
| 20 25 30 | |
| agt gct atg gat gat tat tta ttt gat aca tta tct gta gat aga tta | 144 |
| Ser Ala Met Asp Asp Tyr Leu Phe Asp Thr Leu Ser Val Asp Arg Leu | |
| 35 40 45 | |
| gat ggc gga tat ata aaa cac gaa tgt ggt ata gaa tgt ggg tgt ttt | 192 |
| Asp Gly Gly Tyr Ile Lys His Glu Cys Gly Ile Glu Cys Gly Cys Phe | |
| 50 55 60 | |
| aat ggt aaa tta atg gct agt atg gcg aca gaa atg tca aga gat aat | 240 |
| Asn Gly Lys Leu Met Ala Ser Met Ala Thr Glu Met Ser Arg Asp Asn | |
| 65 70 75 80 | |
| tta ata gca tcg tgt tct aaa agt gca gga gct tct aat gta aaa tca | 288 |
| Leu Ile Ala Ser Cys Ser Lys Ser Ala Gly Ala Ser Asn Val Lys Ser | |
| 85 90 95 | |
| tct aat aat caa aat caa aaa aaa aga aaa tca gaa tct ggt aat aaa | 336 |
| Ser Asn Asn Gln Asn Gln Lys Lys Arg Lys Ser Glu Ser Gly Asn Lys | |
| 100 105 110 | |
| att caa aaa caa tta gat att atg aac aca aaa gaa gat cat att aag | 384 |
| Ile Gln Lys Gln Leu Asp Ile Met Asn Thr Lys Glu Asp His Ile Lys | |
| 115 120 125 | |
| aaa att gct gaa tat gta gct aat aat tta cca aaa tca cct tta aca | 432 |

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|--|
| Lys | Ile | Ala | Glu | Tyr | Val | Ala | Asn | Asn | Leu | Pro | Lys | Ser | Pro | Leu | Thr | | |
| 130 | | | | | | 135 | | | | | 140 | | | | | | |
| tat | aca | gtt | cac | gac | att | aat | aga | tta | att | atc | aca | tct | cct | ttt | aag | 480 | |
| Tyr | Thr | Val | His | Asp | Ile | Asn | Arg | Leu | Ile | Ile | Thr | Ser | Pro | Phe | Lys | | |
| 145 | | | | | 150 | | | | 155 | | | | | | 160 | | |
| gat | gtt | att | tta | aac | gaa | aat | gat | atg | aaa | tct | ata | atc | gga | ttg | gct | 528 | |
| Asp | Val | Ile | Leu | Asn | Glu | Asn | Asp | Met | Lys | Ser | Ile | Ile | Gly | Leu | Ala | | |
| | | | | 165 | | | | | 170 | | | | | 175 | | | |
| gca | gct | ttt | tat | aaa | aat | aaa | aca | ata | aat | cat | tca | tta | tta | tca | act | 576 | |
| Ala | Ala | Phe | Tyr | Lys | Asn | Lys | Thr | Ile | Asn | His | Ser | Leu | Leu | Ser | Thr | | |
| | | | 180 | | | | | 185 | | | | | 190 | | | | |
| att | aat | att | aat | aca | aat | gat | ctt | att | caa | caa | tta | aga | caa | gta | tat | 624 | |
| Ile | Asn | Ile | Asn | Thr | Asn | Asp | Leu | Ile | Gln | Gln | Leu | Arg | Gln | Val | Tyr | | |
| | 195 | | | | | | 200 | | | | | 205 | | | | | |
| aat | tta | tca | aca | tta | gta | gat | tat | gat | tca | ttt | tta | aat | aat | tta | aaa | 672 | |
| Asn | Leu | Ser | Thr | Leu | Val | Asp | Tyr | Asp | Ser | Phe | Leu | Asn | Asn | Leu | Lys | | |
| | 210 | | | | | 215 | | | | | 220 | | | | | | |
| gta | gcc | agt | gtg | gaa | tat | act | gat | att | gca | gat | tgt | aat | gat | tac | att | 720 | |
| Val | Ala | Ser | Val | Glu | Tyr | Thr | Asp | Ile | Ala | Asp | Cys | Asn | Asp | Tyr | Ile | | |
| 225 | | | | | 230 | | | | 235 | | | | | | 240 | | |
| aaa | tat | gtg | cca | gac | gaa | cct | aat | gtt | cca | tca | ata | tta | ttt | gct | tta | 768 | |
| Lys | Tyr | Val | Pro | Asp | Glu | Pro | Asn | Val | Pro | Ser | Ile | Leu | Phe | Ala | Leu | | |
| | | | | 245 | | | | | 250 | | | | | 255 | | | |
| ttt | tct | aca | aga | ata | cct | gta | tta | ttt | gat | att | gtt | gta | aat | caa | gat | 816 | |
| Phe | Ser | Thr | Arg | Ile | Pro | Val | Leu | Phe | Asp | Ile | Val | Val | Asn | Gln | Asp | | |
| | | | 260 | | | | | 265 | | | | | 270 | | | | |
| tta | ttt | aaa | tta | caa | caa | gag | tta | cag | aca | gat | gat | tat | agc | gca | tat | 864 | |
| Leu | Phe | Lys | Leu | Gln | Gln | Glu | Leu | Gln | Thr | Asp | Asp | Tyr | Ser | Ala | Tyr | | |
| | | 275 | | | | | 280 | | | | | 285 | | | | | |
| aaa | aat | ata | tat | cta | ttg | ctt | ttt | aga | tta | tct | gat | aga | gaa | cca | tac | 912 | |
| Lys | Asn | Ile | Tyr | Leu | Leu | Leu | Phe | Arg | Leu | Ser | Asp | Arg | Glu | Pro | Tyr | | |
| | 290 | | | | | 295 | | | | | 300 | | | | | | |
| tat | tca | aat | caa | tct | gga | gga | ctt | agt | aat | aaa | att | gat | gtt | tat | act | 960 | |
| Tyr | Ser | Asn | Gln | Ser | Gly | Gly | Leu | Ser | Asn | Lys | Ile | Asp | Val | Tyr | Thr | | |
| 305 | | | | | 310 | | | | 315 | | | | | | 320 | | |
| gaa | tta | agt | cgt | ata | tta | tta | tct | atg | tcg | att | aaa | aga | tta | ata | tta | 1008 | |
| Glu | Leu | Ser | Arg | Ile | Leu | Leu | Ser | Met | Ser | Ile | Lys | Arg | Leu | Ile | Leu | | |
| | | | | 325 | | | | | 330 | | | | | 335 | | | |
| aaa | att | att | aaa | ggc | aca | gtt | aca | gga | aac | aca | gta | gct | cct | ata | atg | 1056 | |
| Lys | Ile | Ile | Lys | Gly | Thr | Val | Thr | Gly | Asn | Thr | Val | Ala | Pro | Ile | Met | | |
| | | | 340 | | | | | 345 | | | | | 350 | | | | |
| aat | ata | ttt | aaa | aat | tta | tat | att | aaa | aat | gtc | aga | tct | tct | caa | gaa | 1104 | |
| Asn | Ile | Phe | Lys | Asn | Leu | Tyr | Ile | Lys | Asn | Val | Arg | Ser | Ser | Gln | Glu | | |

| 355 | 360 | 365 | |
|---|-----|-----|------|
| gct tta tta tca gca att tta aaa ata tgg tca tat gct cca aca att | | | 1152 |
| Ala Leu Leu Ser Ala Ile Leu Lys Ile Trp Ser Tyr Ala Pro Thr Ile | | | |
| 370 | 375 | 380 | |
| ggt ctg aaa aat ata tca tct gat ttt aga aca gaa act gta ttt ttt | | | 1200 |
| Val Leu Lys Asn Ile Ser Ser Asp Phe Arg Thr Glu Thr Val Phe Phe | | | |
| 385 | 390 | 395 | 400 |
| ggt gaa tat gaa ata tct gaa tac aat caa ttt gaa aat caa aat ata | | | 1248 |
| Val Glu Tyr Glu Ile Ser Glu Tyr Asn Gln Phe Glu Asn Gln Asn Ile | | | |
| | 405 | 410 | 415 |
| aaa ttc act caa gaa tta atg aaa tat att tat tac gat cct att gtt | | | 1296 |
| Lys Phe Thr Gln Glu Leu Met Lys Tyr Ile Tyr Tyr Asp Pro Ile Val | | | |
| | 420 | 425 | 430 |
| aat aaa gtt att ttg tct cct aaa tat att ttg gat tcg ata ggc gga | | | 1344 |
| Asn Lys Val Ile Leu Ser Pro Lys Tyr Ile Leu Asp Ser Ile Gly Gly | | | |
| | 435 | 440 | 445 |
| aac aca ggt atg caa agt ata aca tat tgt aat agt ggt ttt aga agt | | | 1392 |
| Asn Thr Gly Met Gln Ser Ile Thr Tyr Cys Asn Ser Gly Phe Arg Ser | | | |
| | 450 | 455 | 460 |
| att aat cct atg aca aat gta gct tta aaa tca aca ggt atg ttc att | | | 1440 |
| Ile Asn Pro Met Thr Asn Val Ala Leu Lys Ser Thr Gly Met Phe Ile | | | |
| 465 | 470 | 475 | 480 |
| tta tct ata cct aga tta att aaa caa tca tat tct tat ggt tta cct | | | 1488 |
| Leu Ser Ile Pro Arg Leu Ile Lys Gln Ser Tyr Ser Tyr Gly Leu Pro | | | |
| | 485 | 490 | 495 |
| gac gaa ttt tct gat aga tta tta act aaa tat gta gat tta gat caa | | | 1536 |
| Asp Glu Phe Ser Asp Arg Leu Leu Thr Lys Tyr Val Asp Leu Asp Gln | | | |
| | 500 | 505 | 510 |
| aat att acc att ggt tgt aat atg ttt caa tta aga gcg gcc gtt tgt | | | 1584 |
| Asn Ile Thr Ile Gly Cys Asn Met Phe Gln Leu Arg Ala Ala Val Cys | | | |
| | 515 | 520 | 525 |
| tac aaa ata tca aaa tat gtt gat tta gat aca tgt ata cag aat cct | | | 1632 |
| Tyr Lys Ile Ser Lys Tyr Val Asp Leu Asp Thr Cys Ile Gln Asn Pro | | | |
| | 530 | 535 | 540 |
| ata tca tta gga aca gtt gct att gta aaa aca caa aaa ggg tgg att | | | 1680 |
| Ile Ser Leu Gly Thr Val Ala Ile Val Lys Thr Gln Lys Gly Trp Ile | | | |
| 545 | 550 | 555 | 560 |
| aga tat aat cca gat tta atg tat tct tgt aac gaa aag aaa gat tta | | | 1728 |
| Arg Tyr Asn Pro Asp Leu Met Tyr Ser Cys Asn Glu Lys Lys Asp Leu | | | |
| | 565 | 570 | 575 |
| tta gat aaa ata cta aga aat gaa tat aaa aaa tca ttg aat tta aat | | | 1776 |
| Leu Asp Lys Ile Leu Arg Asn Glu Tyr Lys Lys Ser Leu Asn Leu Asn | | | |
| | 580 | 585 | 590 |

aat tat gaa gtt aat caa tat tta gat aaa gat tac gaa gaa tgg aaa 1824
 Asn Tyr Glu Val Asn Gln Tyr Leu Asp Lys Asp Tyr Glu Glu Trp Lys
 595 600 605

agt act ttt tca tct att aat aat att atc gat aaa ttt gaa aaa ggt 1872
 Ser Thr Phe Ser Ser Ile Asn Asn Ile Ile Asp Lys Phe Glu Lys Gly
 610 615 620

tac gta agt aca gat tca tta att att caa gag gca gaa gcc atc gat 1920
 Tyr Val Ser Thr Asp Ser Leu Ile Ile Gln Glu Ala Glu Ala Ile Asp
 625 630 635 640

ata att agt aga tat gga act att ata ata tac gca caa gaa tat act 1968
 Ile Ile Ser Arg Tyr Gly Thr Ile Ile Ile Tyr Ala Gln Glu Tyr Thr
 645 650 655

aat ggt gta gat atg tta cca ctg aga aga tat tat taa 2007
 Asn Gly Val Asp Met Leu Pro Leu Arg Arg Tyr Tyr
 660 665

<210> 49

<211> 723

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (723)

<223>

<400> 49
 atg tcc gaa ttc gat tat gat aaa ctg cgt gct aaa cca ttt aat atg 48
 Met Ser Glu Phe Asp Tyr Asp Lys Leu Arg Ala Lys Pro Phe Asn Met
 1 5 10 15

gca att ata gga aaa aca gga tca ggt aaa act aca ttt tta aag aat 96
 Ala Ile Ile Gly Lys Thr Gly Ser Gly Lys Thr Thr Phe Leu Lys Asn
 20 25 30

tta tta tta aaa att ggt tac gga ttt tat aaa ttt ata tat tta att 144
 Leu Leu Leu Lys Ile Gly Tyr Gly Phe Tyr Lys Phe Ile Tyr Leu Ile
 35 40 45

act agt tct gaa gtt aac ttt aaa tca aat gaa tat ttt aaa ttt att 192
 Thr Ser Ser Glu Val Asn Phe Lys Ser Asn Glu Tyr Phe Lys Phe Ile

| 50 | 55 | 60 | |
|---|-----|-----|-----|
| tat ccc aat cat gtt ttt tat ctt tat tcg aat aac aaa gac aag gat | | | 240 |
| Tyr Pro Asn His Val Phe Tyr Leu Tyr Ser Asn Asn Lys Asp Lys Asp | | | |
| 65 | 70 | 75 | 80 |
| gtt aaa tat tta tta caa gca tat tta gaa aaa att aaa aat ttt agt | | | 288 |
| Val Lys Tyr Leu Leu Gln Ala Tyr Leu Glu Lys Ile Lys Asn Phe Ser | | | |
| | 85 | 90 | 95 |
| ttt gaa atg aat caa aag tgt gaa aat ttt aga aca tta gtt att tat | | | 336 |
| Phe Glu Met Asn Gln Lys Cys Glu Asn Phe Arg Thr Leu Val Ile Tyr | | | |
| | 100 | 105 | 110 |
| gat gat att ggc aaa gac aca aaa gat aaa tta agt aat ttt aca aat | | | 384 |
| Asp Asp Ile Gly Lys Asp Thr Lys Asp Lys Leu Ser Asn Phe Thr Asn | | | |
| | 115 | 120 | 125 |
| gtg tgc aga cat tcg tta gta tca aat att ttt cta gtt cat aga tta | | | 432 |
| Val Cys Arg His Ser Leu Val Ser Asn Ile Phe Leu Val His Arg Leu | | | |
| | 130 | 135 | 140 |
| gaa cat tta gat aca act aca aga gat agt tta tca tat cat gtt ata | | | 480 |
| Glu His Leu Asp Thr Thr Thr Arg Asp Ser Leu Ser Tyr His Val Ile | | | |
| | 145 | 150 | 155 |
| aat tcc gaa tca gaa aat atg gat tta ata cct tgt aat aaa aat cta | | | 528 |
| Asn Ser Glu Ser Glu Asn Met Asp Leu Ile Pro Cys Asn Lys Asn Leu | | | |
| | 165 | 170 | 175 |
| aga aat tca tta ctt gca tct gtg ata aat att ttt aaa gat cgc gaa | | | 576 |
| Arg Asn Ser Leu Leu Ala Ser Val Ile Asn Ile Phe Lys Asp Arg Glu | | | |
| | 180 | 185 | 190 |
| caa tca aaa tat tat ata tat tgt ata ata tat gat tct gta tct tat | | | 624 |
| Gln Ser Lys Tyr Tyr Ile Tyr Cys Ile Ile Tyr Asp Ser Val Ser Tyr | | | |
| | 195 | 200 | 205 |
| tct tgt tta ata tca gac gat gat tta gaa aat ata aaa aat gaa gat | | | 672 |
| Ser Cys Leu Ile Ser Asp Asp Asp Leu Glu Asn Ile Lys Asn Glu Asp | | | |
| | 210 | 215 | 220 |
| aaa tat gta ttt tat act gat tcc gtg att aaa tct cat ata cta aat | | | 720 |
| Lys Tyr Val Phe Tyr Thr Asp Ser Val Ile Lys Ser His Ile Leu Asn | | | |
| | 225 | 230 | 235 |
| taa | | | 723 |

<210> 50

<211> 1407

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (1407)

<223>

<400> 50

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|---|-----|
| atg agt aat att gaa ata tat gat atg ttt gaa ggt gat aag gaa gta | 48 |
| Met Ser Asn Ile Glu Ile Tyr Asp Met Phe Glu Gly Asp Lys Glu Val | |
| 1 5 10 15 | |
| cta ttt ata gct ggt tca cat ata aat gaa tta aaa gct gat aaa aat | 96 |
| Leu Phe Ile Ala Gly Ser His Ile Asn Glu Leu Lys Ala Asp Lys Asn | |
| 20 25 30 | |
| tta tgt agt gaa gtt ata aat aat gtt gtt aat gat ttt tcg ttt tct | 144 |
| Leu Cys Ser Glu Val Ile Asn Asn Val Val Asn Asp Phe Ser Phe Ser | |
| 35 40 45 | |
| aac att gaa aaa aac ttt aaa aat ata aaa aaa att aat aaa ttt aaa | 192 |
| Asn Ile Glu Lys Asn Phe Lys Asn Ile Lys Lys Ile Asn Lys Phe Lys | |
| 50 55 60 | |
| tat aaa att att aat gat att aca aat gta act gaa aca gat tat ttt | 240 |
| Tyr Lys Ile Ile Asn Asp Ile Thr Asn Val Thr Glu Thr Asp Tyr Phe | |
| 65 70 75 80 | |
| aaa cca tat ttt aaa atg aaa cca tat atg gct aat caa tat ata tat | 288 |
| Lys Pro Tyr Phe Lys Met Lys Pro Tyr Met Ala Asn Gln Tyr Ile Tyr | |
| 85 90 95 | |
| cat ata cat act gga gga tat ggc atg act gtt cgt att aat gaa agt | 336 |
| His Ile His Thr Gly Gly Tyr Gly Met Thr Val Arg Ile Asn Glu Ser | |
| 100 105 110 | |
| ttt tgt ttt aaa ata tca tta aat cca act aat aat cag ata cat gaa | 384 |
| Phe Cys Phe Lys Ile Ser Leu Asn Pro Thr Asn Asn Gln Ile His Glu | |
| 115 120 125 | |
| ttt gta ata ccc agg atg tta tct agt att ata tct tat tca aac gca | 432 |
| Phe Val Ile Pro Arg Met Leu Ser Ser Ile Ile Ser Tyr Ser Asn Ala | |
| 130 135 140 | |
| gac aaa tta ata tta tta cca tat aca tta ata aag aat ata aat ttc | 480 |
| Asp Lys Leu Ile Leu Leu Pro Tyr Thr Leu Ile Lys Asn Ile Asn Phe | |
| 145 150 155 160 | |
| aat gga ttg ata tat ata ata agt atg cat aat ata att tta tta tta | 528 |
| Asn Gly Leu Ile Tyr Ile Ile Ser Met His Asn Ile Ile Leu Leu Leu | |
| 165 170 175 | |

| | |
|---|------|
| att aat ttt ata tta gat aaa aat tat agt aat att gat ata tat aat Ile Asn Phe Ile Leu Asp Lys Asn Tyr Ser Asn Ile Asp Ile Tyr Asn 180 185 190 | 576 |
| aca tat tta gat ttt aat aaa atg aat agt att tat aga tct tta aca Thr Tyr Leu Asp Phe Asn Lys Met Asn Ser Ile Tyr Arg Ser Leu Thr 195 200 205 | 624 |
| aaa gat gaa gaa tta tta tat aaa tgt ttt act tat ttt tat aaa aaa Lys Asp Glu Glu Leu Leu Tyr Lys Cys Phe Thr Tyr Phe Tyr Lys Lys 210 215 220 | 672 |
| tat ttt aaa aat att ttt aat gtt ata atg att aat aat tat tca tca Tyr Phe Lys Asn Ile Phe Asn Val Ile Met Ile Asn Asn Tyr Ser Ser 225 230 235 240 | 720 |
| ata att tat tat tta agt act att aaa gat tta tta act aat aaa gat Ile Ile Tyr Tyr Leu Ser Thr Ile Lys Asp Leu Leu Thr Asn Lys Asp 245 250 255 | 768 |
| tat aaa gac aaa ata tat gga tct att ata ata atg cct tta gct ata Tyr Lys Asp Lys Ile Tyr Gly Ser Ile Ile Ile Met Pro Leu Ala Ile 260 265 270 | 816 |
| tgt gcg tcg aat gag ttg aaa ctt tca ata tat aat gac aca tat gtt Cys Ala Ser Asn Glu Leu Lys Leu Ser Ile Tyr Asn Asp Thr Tyr Val 275 280 285 | 864 |
| cca gat atg ata aat gga aat att gca tat gaa gta aat aat aga tat Pro Asp Met Ile Asn Gly Asn Ile Ala Tyr Glu Val Asn Asn Arg Tyr 290 295 300 | 912 |
| ata aga cat att gta tta gtt gtt tta tta tta ata tgt ata cca aac Ile Arg His Ile Val Leu Val Val Leu Leu Leu Ile Cys Ile Pro Asn 305 310 315 320 | 960 |
| aaa gat aga atg ata ttt ttt cac aat gat ata aaa ccc aat aat ata Lys Asp Arg Met Ile Phe Phe His Asn Asp Ile Lys Pro Asn Asn Ile 325 330 335 | 1008 |
| tta gtt ttt cct aat gta aat aaa gaa aaa tta ata ata aaa tat aac Leu Val Phe Pro Asn Val Asn Lys Glu Lys Leu Ile Ile Lys Tyr Asn 340 345 350 | 1056 |
| aat agg aat ata ata ttt aaa gaa tta tat ata tta aaa tta aca gat Asn Arg Asn Ile Ile Phe Lys Glu Leu Tyr Ile Leu Lys Leu Thr Asp 355 360 365 | 1104 |
| ttt gat tta tct aga ata gaa gga tta gat aac aat aga att aaa aat Phe Asp Leu Ser Arg Ile Glu Gly Leu Asp Asn Asn Arg Ile Lys Asn 370 375 380 | 1152 |
| tct cca ata tta tta tat aat aac ata att aac gat ata tat tat ttt Ser Pro Ile Leu Leu Tyr Asn Asn Ile Ile Asn Asp Ile Tyr Tyr Phe 385 390 395 400 | 1200 |
| ttt tat aga tta aaa tat gat ttt ttt tta aat tta aaa aca ata gat | 1248 |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Phe | Tyr | Arg | Leu | Lys | Tyr | Asp | Phe | Phe | Leu | Asn | Leu | Lys | Thr | Ile | Asp | |
| | | | | 405 | | | | | 410 | | | | | 415 | | |
| cca | gag | tta | aac | gaa | cat | ata | gaa | aat | aaa | ttt | tta | tta | aaa | aaa | tat | 1296 |
| Pro | Glu | Leu | Asn | Glu | His | Ile | Glu | Asn | Lys | Phe | Leu | Leu | Lys | Lys | Tyr | |
| | | | 420 | | | | | 425 | | | | | 430 | | | |
| atg | aaa | gat | act | ata | aat | aat | cat | aat | tac | aaa | gga | aat | gaa | aaa | atg | 1344 |
| Met | Lys | Asp | Thr | Ile | Asn | Asn | His | Asn | Tyr | Lys | Gly | Asn | Glu | Lys | Met | |
| | | 435 | | | | | 440 | | | | | 445 | | | | |
| tct | ata | agt | ttt | gtt | aat | gat | ttc | ata | ttt | aat | tct | gga | tta | ttt | aat | 1392 |
| Ser | Ile | Ser | Phe | Val | Asn | Asp | Phe | Ile | Phe | Asn | Ser | Gly | Leu | Phe | Asn | |
| | 450 | | | | | 455 | | | | 460 | | | | | | |
| tat | tgg | tta | gat | taa | | | | | | | | | | | | 1407 |
| Tyr | Trp | Leu | Asp | | | | | | | | | | | | | |
| 465 | | | | | | | | | | | | | | | | |

<210> 51

<211> 714

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1)..(714)

<223>

<400> 51

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| atg | tcg | gac | gtc | gat | tat | gat | gat | gat | caa | ttg | gag | cct | agc | gat | gaa | 48 |
| Met | Ser | Asp | Val | Asp | Tyr | Asp | Asp | Asp | Gln | Leu | Glu | Pro | Ser | Asp | Glu | |
| 1 | | | 5 | | | | | 10 | | | | | 15 | | | |
| gaa | gat | atg | gat | gat | cta | gtg | tat | agt | gaa | gtt | tgt | gca | aat | gat | gaa | 96 |
| Glu | Asp | Met | Asp | Asp | Leu | Val | Tyr | Ser | Glu | Val | Cys | Ala | Asn | Asp | Glu | |
| | | | 20 | | | | 25 | | | | | 30 | | | | |
| tct | gac | gaa | tct | gaa | ata | aat | tta | tta | gat | gaa | ata | att | aac | gaa | gaa | 144 |
| Ser | Asp | Glu | Ser | Glu | Ile | Asn | Leu | Leu | Asp | Glu | Ile | Ile | Asn | Glu | Glu | |
| | | 35 | | | | 40 | | | | | 45 | | | | | |
| caa | gaa | atg | gaa | ata | att | aaa | aaa | ata | aaa | acc | aaa | gat | aaa | att | aaa | 192 |
| Gln | Glu | Met | Glu | Ile | Ile | Lys | Lys | Ile | Lys | Thr | Lys | Asp | Lys | Ile | Lys | |
| | 50 | | | | | 55 | | | | 60 | | | | | | |

| | |
|---|-----|
| tat ttt aaa ggt aaa att ata gat atg aat aaa ata aat aaa gca aaa | 240 |
| Tyr Phe Lys Gly Lys Ile Ile Asp Met Asn Lys Ile Asn Lys Ala Lys | |
| 65 70 75 80 | |
| gaa aaa tat tta tat aat ata aaa ttt aat gaa tta ttg tct ata ttt | 288 |
| Glu Lys Tyr Leu Tyr Asn Ile Lys Phe Asn Glu Leu Leu Ser Ile Phe | |
| 85 90 95 | |
| cta aat tat act aat att tta caa agt ggt gga ttg cca tta tta gat | 336 |
| Leu Asn Tyr Thr Asn Ile Leu Gln Ser Gly Gly Leu Pro Leu Leu Asp | |
| 100 105 110 | |
| gaa att aaa tta aaa aat aat tat aat att gaa tta ttt tca aat tct | 384 |
| Glu Ile Lys Leu Lys Asn Asn Tyr Asn Ile Glu Leu Phe Ser Asn Ser | |
| 115 120 125 | |
| tct aca aca cca gaa aca gca gca atg ata atg tta ata att atg aat | 432 |
| Ser Thr Thr Pro Glu Thr Ala Ala Met Ile Met Leu Ile Ile Met Asn | |
| 130 135 140 | |
| ata cct atg tgt gtt aaa aaa aac aat aaa ata tat aat aga gaa gta | 480 |
| Ile Pro Met Cys Val Lys Lys Asn Asn Lys Ile Tyr Asn Arg Glu Val | |
| 145 150 155 160 | |
| tta aat ata gat aaa ttg aat atc gat tat ata aat tgt tat tac caa | 528 |
| Leu Asn Ile Asp Lys Leu Asn Ile Asp Tyr Ile Asn Cys Tyr Tyr Gln | |
| 165 170 175 | |
| aat gta aaa aat atg tta cga tgt gtt aca tat aat tct aat aat aaa | 576 |
| Asn Val Lys Asn Met Leu Arg Cys Val Thr Tyr Asn Ser Asn Asn Lys | |
| 180 185 190 | |
| ttt gat ttt aat aaa ttt aaa att tta ttt ccg tta ttt ata gaa tat | 624 |
| Phe Asp Phe Asn Lys Phe Lys Ile Leu Phe Pro Leu Phe Ile Glu Tyr | |
| 195 200 205 | |
| ata aat cgt gat gaa att agt aat gaa gaa tta gat gaa att aaa aat | 672 |
| Ile Asn Arg Asp Glu Ile Ser Asn Glu Glu Leu Asp Glu Ile Lys Asn | |
| 210 215 220 | |
| gtt aaa aga att ata aca aat tat gat tat gaa aat tta taa | 714 |
| Val Lys Arg Ile Ile Thr Asn Tyr Asp Tyr Glu Asn Leu | |
| 225 230 235 | |

<210> 52

<211> 246

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (246)

<223>

<400> 52

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| atg | caa | ata | ttc | att | aaa | aca | tta | aca | ggt | aaa | aca | atc | aca | cta | gaa | 48 |
| Met | Gln | Ile | Phe | Ile | Lys | Thr | Leu | Thr | Gly | Lys | Thr | Ile | Thr | Leu | Glu | |
| 1 | | | 5 | | | | | | 10 | | | | | 15 | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| gta | gaa | agt | tca | gat | act | ata | tca | aat | att | aaa | aat | aaa | ata | caa | gat | 96 |
| Val | Glu | Ser | Ser | Asp | Thr | Ile | Ser | Asn | Ile | Lys | Asn | Lys | Ile | Gln | Asp | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| aaa | gaa | gga | att | cct | ccg | gat | cag | caa | aga | ttg | att | ttt | gct | gga | aaa | 144 |
| Lys | Glu | Gly | Ile | Pro | Pro | Asp | Gln | Gln | Arg | Leu | Ile | Phe | Ala | Gly | Lys | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| caa | tta | gat | gat | agc | aga | act | ctt | tca | gat | tat | aat | ata | tct | aaa | gaa | 192 |
| Gln | Leu | Asp | Asp | Ser | Arg | Thr | Leu | Ser | Asp | Tyr | Asn | Ile | Ser | Lys | Glu | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| tct | act | tta | cat | ttg | gta | tta | aga | ctt | aga | ggt | gga | acg | aat | ata | aat | 240 |
| Ser | Thr | Leu | His | Leu | Val | Leu | Arg | Leu | Arg | Gly | Gly | Thr | Asn | Ile | Asn | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |

| | | | | | | | | | | | | | | | | |
|-----|-----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-----|
| tat | tag | | | | | | | | | | | | | | | 246 |
| Tyr | | | | | | | | | | | | | | | | |

<210> 53

<211> 2013

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (2013)

<223>

<400> 53

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| atg | aat | aaa | gtt | ata | tta | gat | gat | ttg | aga | aat | gat | aat | att | ccg | aac | 48 |
| Met | Asn | Lys | Val | Ile | Leu | Asp | Asp | Leu | Arg | Asn | Asp | Asn | Ile | Pro | Asn | |

| 1 | 5 | 10 | 15 | |
|---|-----|-----|-----|-----|
| aat att gct caa att ttg cct cat cag tta gca aca tta gat ttt tta | | | | 96 |
| Asn Ile Ala Gln Ile Leu Pro His Gln Leu Ala Thr Leu Asp Phe Leu | | | | |
| | 20 | 25 | 30 | |
| tat caa aaa tgt ata aat aat gct aat agt gtt tta ttg ttt cat aaa | | | | 144 |
| Tyr Gln Lys Cys Ile Asn Asn Ala Asn Ser Val Leu Leu Phe His Lys | | | | |
| | 35 | 40 | 45 | |
| atg ggt tct ggt aaa aca att att tct ctt ttg ttt agc ata tta ata | | | | 192 |
| Met Gly Ser Gly Lys Thr Ile Ile Ser Leu Leu Phe Ser Ile Leu Ile | | | | |
| | 50 | 55 | 60 | |
| tgt aat att aaa aaa gtt ata ata gta ttg cct agt tat agt ata tta | | | | 240 |
| Cys Asn Ile Lys Lys Val Ile Ile Val Leu Pro Ser Tyr Ser Ile Leu | | | | |
| | 65 | 70 | 75 | 80 |
| gaa atg tgg aaa caa aat tta tat aga tct tta att tta ctt cct aat | | | | 288 |
| Glu Met Trp Lys Gln Asn Leu Tyr Arg Ser Leu Ile Leu Leu Pro Asn | | | | |
| | 85 | 90 | 95 | |
| aaa gaa tat aat tta caa aat att gaa ttt aca act aga aca aaa tta | | | | 336 |
| Lys Glu Tyr Asn Leu Gln Asn Ile Glu Phe Thr Thr Arg Thr Lys Leu | | | | |
| | 100 | 105 | 110 | |
| aac gaa gat ata atg tta ata ggt aaa act gat ata ata aat gaa aaa | | | | 384 |
| Asn Glu Asp Ile Met Leu Ile Gly Lys Thr Asp Ile Ile Asn Glu Lys | | | | |
| | 115 | 120 | 125 | |
| tta aaa aat tat aac gat tat att atg ata ata gat gaa gca cat aat | | | | 432 |
| Leu Lys Asn Tyr Asn Asp Tyr Ile Met Ile Ile Asp Glu Ala His Asn | | | | |
| | 130 | 135 | 140 | |
| ttt ttt gga aat atg aca ggt agt gta tta tct act cta aga aaa aat | | | | 480 |
| Phe Phe Gly Asn Met Thr Gly Ser Val Leu Ser Thr Leu Arg Lys Asn | | | | |
| | 145 | 150 | 155 | 160 |
| aca aat ata ata tat gtt tta ttg aca ggt agt ccg ata aca aat act | | | | 528 |
| Thr Asn Ile Ile Tyr Val Leu Leu Thr Gly Ser Pro Ile Thr Asn Thr | | | | |
| | 165 | 170 | 175 | |
| gtt tcg aca ata aaa gat att gtg gaa tta tta act agg gaa aca ttt | | | | 576 |
| Val Ser Thr Ile Lys Asp Ile Val Glu Leu Leu Thr Arg Glu Thr Phe | | | | |
| | 180 | 185 | 190 | |
| gat gaa aat aag tat att aaa ata ggt gga aat cgt gtt ttt gaa aaa | | | | 624 |
| Asp Glu Asn Lys Tyr Ile Lys Ile Gly Gly Asn Arg Val Phe Glu Lys | | | | |
| | 195 | 200 | 205 | |
| agt ata aat aac gaa ggt att gca ttt tta aat aaa aat cta aag ggt | | | | 672 |
| Ser Ile Asn Asn Glu Gly Ile Ala Phe Leu Asn Lys Asn Leu Lys Gly | | | | |
| | 210 | 215 | 220 | |
| tta ata tca tat tat gat gaa gag agg aaa gat gtt cct gaa gta aaa | | | | 720 |
| Leu Ile Ser Tyr Tyr Asp Glu Glu Arg Lys Asp Val Pro Glu Val Lys | | | | |
| | 225 | 230 | 235 | 240 |

| | |
|---|------|
| tac aga ggt aaa aaa ata ttt cta tgt cct ttg aca tta tgt cca atg | 768 |
| Tyr Arg Gly Lys Lys Ile Phe Leu Cys Pro Leu Thr Leu Cys Pro Met | |
| 245 250 255 | |
| tct aaa tta cat gaa gaa aat tat tat gaa gta gct aga aat act aaa | 816 |
| Ser Lys Leu His Glu Glu Asn Tyr Tyr Glu Val Ala Arg Asn Thr Lys | |
| 260 265 270 | |
| aat gat atg ttt gtt aaa tta tta atg agt gtt tcg ttg gtt gca tta | 864 |
| Asn Asp Met Phe Val Lys Leu Leu Met Ser Val Ser Leu Val Ala Leu | |
| 275 280 285 | |
| gga tct ata tca aat tat gaa aat ttt tca caa ttt atg gag aca gat | 912 |
| Gly Ser Ile Ser Asn Tyr Glu Asn Phe Ser Gln Phe Met Glu Thr Asp | |
| 290 295 300 | |
| aaa aaa ata ttt gat aat ttt tat att tct aat gga aaa ttt tca gga | 960 |
| Lys Lys Ile Phe Asp Asn Phe Tyr Ile Ser Asn Gly Lys Phe Ser Gly | |
| 305 310 315 320 | |
| tct gaa tta gtt aca tta aat ata tct tct aaa tta aaa act ttt aga | 1008 |
| Ser Glu Leu Val Thr Leu Asn Ile Ser Ser Lys Leu Lys Thr Phe Arg | |
| 325 330 335 | |
| gat act ata ttt aaa gaa aga aat gtt ggt aaa cga ttt gta tat ttt | 1056 |
| Asp Thr Ile Phe Lys Glu Arg Asn Val Gly Lys Arg Phe Val Tyr Phe | |
| 340 345 350 | |
| gct aat agt act ata gga agt gct ata ata aga agt gtt atg tta gca | 1104 |
| Ala Asn Ser Thr Ile Gly Ser Ala Ile Ile Arg Ser Val Met Leu Ala | |
| 355 360 365 | |
| aat ggc ata tct gaa tat gga aaa gaa att gtt aat aat ttt aca tgt | 1152 |
| Asn Gly Ile Ser Glu Tyr Gly Lys Glu Ile Val Asn Asn Phe Thr Cys | |
| 370 375 380 | |
| gtt aat tgt ata aag gat aaa att tgt cac aat gga gaa tgt att cct | 1200 |
| Val Asn Cys Ile Lys Asp Lys Ile Cys His Asn Gly Glu Cys Ile Pro | |
| 385 390 395 400 | |
| atg aga ttt gta ata att aca tca aaa gaa tta aat aaa gga aat agt | 1248 |
| Met Arg Phe Val Ile Ile Thr Ser Lys Glu Leu Asn Lys Gly Asn Ser | |
| 405 410 415 | |
| aat tat ata aat aat att tta agt att ttt aac gaa gat att aat gat | 1296 |
| Asn Tyr Ile Asn Asn Ile Leu Ser Ile Phe Asn Glu Asp Ile Asn Asp | |
| 420 425 430 | |
| gat gga aat aat ata atg ttt tta ttt ggt tca aaa att ata tca gaa | 1344 |
| Asp Gly Asn Asn Ile Met Phe Leu Phe Gly Ser Lys Ile Ile Ser Glu | |
| 435 440 445 | |
| gct tat act tta aaa aac gta aaa gat ata tgg ttt tta act gtt cct | 1392 |
| Ala Tyr Thr Leu Lys Asn Val Lys Asp Ile Trp Phe Leu Thr Val Pro | |
| 450 455 460 | |

| | |
|---|------|
| gaa aca aaa tct gaa tta gat caa tgt gta gct aga gct gtt aga tca | 1440 |
| Glu Thr Lys Ser Glu Leu Asp Gln Cys Val Ala Arg Ala Val Arg Ser | |
| 465 470 475 480 | |
| | |
| ttt tct tat aaa gat act aat aca aaa gta ata att aga ata tgt att | 1488 |
| Phe Ser Tyr Lys Asp Thr Asn Thr Lys Val Ile Ile Arg Ile Cys Ile | |
| 485 490 495 | |
| | |
| gca tca aca aca aat aca tta agt aac gat gtt tct aaa aca att gaa | 1536 |
| Ala Ser Thr Thr Asn Thr Leu Ser Asn Asp Val Ser Lys Thr Ile Glu | |
| 500 505 510 | |
| | |
| caa tat aaà gat gtt aat att tct gat gtt tat aaa aat act tta tta | 1584 |
| Gln Tyr Lys Asp Val Asn Ile Ser Asp Val Tyr Lys Asn Thr Leu Leu | |
| 515 520 525 | |
| | |
| aat aaa att gaa tta ttg tta acg gaa agt tcg tat act tta tct tat | 1632 |
| Asn Lys Ile Glu Leu Leu Leu Thr Glu Ser Ser Tyr Thr Leu Ser Tyr | |
| 530 535 540 | |
| | |
| gat ttt aga aaa caa tta tat tct gaa tta aaa ttt gaa aaa tct aaa | 1680 |
| Asp Phe Arg Lys Gln Leu Tyr Ser Glu Leu Lys Phe Glu Lys Ser Lys | |
| 545 550 555 560 | |
| | |
| gta gct gat aat ata ttt aaa aat cta act att tta tct tca gat acc | 1728 |
| Val Ala Asp Asn Ile Phe Lys Asn Leu Thr Ile Leu Ser Ser Asp Thr | |
| 565 570 575 | |
| | |
| atc gag agt gat gtt ttg gaa tgt ttt gtt tta gaa aaa atc cga aga | 1776 |
| Ile Glu Ser Asp Val Leu Glu Cys Phe Val Leu Glu Lys Ile Arg Arg | |
| 580 585 590 | |
| | |
| tat tgt tat tac aat aca aga ttt aaa ttt aca aca tta aac gaa tat | 1824 |
| Tyr Cys Tyr Tyr Asn Thr Arg Phe Lys Phe Thr Thr Leu Asn Glu Tyr | |
| 595 600 605 | |
| | |
| ata att aaa aat ata gat att aaa tat aat gat aaa ata aaa gaa tat | 1872 |
| Ile Ile Lys Asn Ile Asp Ile Lys Tyr Asn Asp Lys Ile Lys Glu Tyr | |
| 610 615 620 | |
| | |
| att aat aat gct ata gaa tca tca ttt gtt ata gaa aat gat ata ttt | 1920 |
| Ile Asn Asn Ala Ile Glu Ser Ser Phe Val Ile Glu Asn Asp Ile Phe | |
| 625 630 635 640 | |
| | |
| ggt aat tgc tat tta aca tat ttt aaa aat gat att gtt acg gtt ccc | 1968 |
| Gly Asn Cys Tyr Leu Thr Tyr Phe Lys Asn Asp Ile Val Thr Val Pro | |
| 645 650 655 | |
| | |
| ata gta tta gaa tat aat aat cat cta tta tca gtt aga ttg tga | 2013 |
| Ile Val Leu Glu Tyr Asn Asn His Leu Leu Ser Val Arg Leu | |
| 660 665 670 | |

<210> 54

<211> 1395

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (1395)

<223>

<400> 54

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|---|-----|
| atg aat aat aaa att aga aga ttt cca aat aaa aat tta aaa atg cca | 48 |
| Met Asn Asn Lys Ile Arg Arg Phe Pro Asn Lys Asn Leu Lys Met Pro | |
| 1 5 10 15 | |
| gaa tct ggt att aat ttt atg tct atg tta ttt ttt agt aaa ata gat | 96 |
| Glu Ser Gly Ile Asn Phe Met Ser Met Leu Phe Phe Ser Lys Ile Asp | |
| 20 25 30 | |
| aat atg gta tat ttt ata aat cct att aaa tat aat act aat gca aat | 144 |
| Asn Met Val Tyr Phe Ile Asn Pro Ile Lys Tyr Asn Thr Asn Ala Asn | |
| 35 40 45 | |
| ata gct ata tta gaa aaa ata gat gat gat gat gaa aca aga ggt aaa | 192 |
| Ile Ala Ile Leu Glu Lys Ile Asp Asp Asp Asp Glu Thr Arg Gly Lys | |
| 50 55 60 | |
| gta aca ttt ata cct ata aaa tac ttg gaa ata tta tat aat gaa tta | 240 |
| Val Thr Phe Ile Pro Ile Lys Tyr Leu Glu Ile Leu Tyr Asn Glu Leu | |
| 65 70 75 80 | |
| gtt tta gat cca aat cat att aat aat att aat ttt gaa aat aat att | 288 |
| Val Leu Asp Pro Asn His Ile Asn Asn Ile Asn Phe Glu Asn Asn Ile | |
| 85 90 95 | |
| aaa aga aaa ttt ttt cta ttt tgg act ata aaa aaa tat tta caa gat | 336 |
| Lys Arg Lys Phe Phe Leu Phe Trp Thr Ile Lys Lys Tyr Leu Gln Asp | |
| 100 105 110 | |
| aaa aat ata aat att aat act ttt att aca tct aaa aaa tat aaa ggc | 384 |
| Lys Asn Ile Asn Ile Asn Thr Phe Ile Thr Ser Lys Lys Tyr Lys Gly | |
| 115 120 125 | |
| att cca tta gta tat atg aga aag tct ttt cta aaa tca gaa tta tcc | 432 |
| Ile Pro Leu Val Tyr Met Arg Lys Ser Phe Leu Lys Ser Glu Leu Ser | |
| 130 135 140 | |
| aaa aca aga gat ttt tct aca ttt gcc aca att tat gat gat ttg gat | 480 |
| Lys Thr Arg Asp Phe Ser Thr Phe Ala Thr Ile Tyr Asp Asp Leu Asp | |
| 145 150 155 160 | |

| | |
|---|------|
| gct caa ata gga ata ccg cct ttg gga ttt aat cct aaa cct aaa gct | 528 |
| Ala Gln Ile Gly Ile Pro Pro Leu Gly Phe Asn Pro Lys Pro Lys Ala | |
| 165 170 175 | |
| tac cca aga aaa cat gat aaa tct aca tgg tta agt tcg gga gat ata | 576 |
| Tyr Pro Arg Lys His Asp Lys Ser Thr Trp Leu Ser Ser Gly Asp Ile | |
| 180 185 190 | |
| tat aat tgt ata tat cca tta act atg att aat aca gat tat gat tat | 624 |
| Tyr Asn Cys Ile Tyr Pro Leu Thr Met Ile Asn Thr Asp Tyr Asp Tyr | |
| 195 200 205 | |
| ttt cat ttg att tta ttt gaa aaa act gat aaa aat att gct aca gta | 672 |
| Phe His Leu Ile Leu Phe Glu Lys Thr Asp Lys Asn Ile Ala Thr Val | |
| 210 215 220 | |
| gct tca tct atg aga tgc tat aaa ctt gaa gat aga gta aaa ttt ttt | 720 |
| Ala Ser Ser Met Arg Cys Tyr Lys Leu Glu Asp Arg Val Lys Phe Phe | |
| 225 230 235 240 | |
| tta atg aat gat aaa aaa aga ttt ttt atg ttt cct ata att tat aat | 768 |
| Leu Met Asn Asp Lys Lys Arg Phe Phe Met Phe Pro Ile Ile Tyr Asn | |
| 245 250 255 | |
| gat cat ttt act tgt tgc gta ata gat aaa cac ttt gat aaa gat aaa | 816 |
| Asp His Phe Thr Cys Cys Val Ile Asp Lys His Phe Asp Lys Asp Lys | |
| 260 265 270 | |
| aaa gct gca tac ttt ttt aat agt agt ggt tat ata cca gaa ctt ata | 864 |
| Lys Ala Ala Tyr Phe Phe Asn Ser Ser Gly Tyr Ile Pro Glu Leu Ile | |
| 275 280 285 | |
| aaa caa aat aaa aaa tat atg ttt att gaa tct gat atg act ata aaa | 912 |
| Lys Gln Asn Lys Lys Tyr Met Phe Ile Glu Ser Asp Met Thr Ile Lys | |
| 290 295 300 | |
| agc cat aaa cac tac aat agt act cct aat act aat tat gct tat tta | 960 |
| Ser His Lys His Tyr Asn Ser Thr Pro Asn Thr Asn Tyr Ala Tyr Leu | |
| 305 310 315 320 | |
| tac att gat gta cta tca gaa tat tta aat gat ata ttt aaa aat gta | 1008 |
| Tyr Ile Asp Val Leu Ser Glu Tyr Leu Asn Asp Ile Phe Lys Asn Val | |
| 325 330 335 | |
| aat tat tac ttt ttt aat act ttt gaa tta caa tat gat agt ccc gat | 1056 |
| Asn Tyr Tyr Phe Phe Asn Thr Phe Glu Leu Gln Tyr Asp Ser Pro Asp | |
| 340 345 350 | |
| tgt ggt atg ttt aat ata ata ttt tta tat tat ata gtt tat ttc aac | 1104 |
| Cys Gly Met Phe Asn Ile Ile Phe Leu Tyr Tyr Ile Val Tyr Phe Asn | |
| 355 360 365 | |
| ata aaa tct aaa ttt gaa ttt aaa aaa tta tat tat tct atg agt ttt | 1152 |
| Ile Lys Ser Lys Phe Glu Phe Lys Lys Leu Tyr Tyr Ser Met Ser Phe | |
| 370 375 380 | |
| att ggt gat tta ttg gct agt agt tat aga ggt gca tta ttt att tct | 1200 |

ata gga tta aaa aat ttg aat agt atg tta tta ttt tgg gat act ggt 192
Ile Gly Leu Lys Asn Leu Asn Ser Met Leu Leu Phe Trp Asp Thr Gly

| 50 | 55 | 60 | |
|---|----|----|-----|
| atg gga aaa aca tta act gct gtg tat att ata aaa tat ata aaa gaa Met Gly Lys Thr Leu Thr Ala Val Tyr Ile Ile Lys Tyr Ile Lys Glu 65 70 75 80 | | | 240 |
| tta ttt cca aga tgg ata att tta ata ttt att aaa aaa tca tta tac Leu Phe Pro Arg Trp Ile Ile Leu Ile Phe Ile Lys Lys Ser Leu Tyr 85 90 95 | | | 288 |
| ata gat cct tgg tta aat act ata aga tca tat ata tca gat acc agt Ile Asp Pro Trp Leu Asn Thr Ile Arg Ser Tyr Ile Ser Asp Thr Ser 100 105 110 | | | 336 |
| aat ata aaa ttt ata tat tat gat tgc tca tct agt tta gat aaa ttt Asn Ile Lys Phe Ile Tyr Tyr Asp Ser Ser Ser Ser Leu Asp Lys Phe 115 120 125 | | | 384 |
| aat aat ata tat aga tct ata gaa agt tct ctt aat aaa aaa agt aga Asn Asn Ile Tyr Arg Ser Ile Glu Ser Ser Leu Asn Lys Lys Ser Arg 130 135 140 | | | 432 |
| tta cta ata ata ata gac gaa gtt cat aaa tta ata tca aga act gtt Leu Leu Ile Ile Ile Asp Glu Val His Lys Leu Ile Ser Arg Thr Val 145 150 155 160 | | | 480 |
| aaa aaa gat aat aac gaa aga aat ttt act cct att tat aaa aaa tta Lys Lys Asp Asn Asn Glu Arg Asn Phe Thr Pro Ile Tyr Lys Lys Leu 165 170 175 | | | 528 |
| ata aaa tta gca aat ttc gaa aat aat aaa ata tta tgt atg tcc gct Ile Lys Leu Ala Asn Phe Glu Asn Asn Lys Ile Leu Cys Met Ser Ala 180 185 190 | | | 576 |
| act cca gta act aat aat att tct gaa ttt aat aat tta ata ggt tta Thr Pro Val Thr Asn Asn Ile Ser Glu Phe Asn Asn Leu Ile Gly Leu 195 200 205 | | | 624 |
| ctt aga cca aat gtt atg aat ata aaa gaa gaa tat ata aat aat gga Leu Arg Pro Asn Val Met Asn Ile Lys Glu Glu Tyr Ile Asn Asn Gly 210 215 220 | | | 672 |
| aag tta att aat ttt aag gaa tta aga gaa aca tta tta gct ata tgt Lys Leu Ile Asn Phe Lys Glu Leu Arg Glu Thr Leu Leu Ala Ile Cys 225 230 235 240 | | | 720 |
| tct tat aaa aga tta ata gaa gca gat agt tta aca gaa aca aat tat Ser Tyr Lys Arg Leu Ile Glu Ala Asp Ser Leu Thr Glu Thr Asn Tyr 245 250 255 | | | 768 |
| ata gat gga tat gca aaa aaa aat ata ttt tat cat aat ata att atg Ile Asp Gly Tyr Ala Lys Lys Asn Ile Phe Tyr His Asn Ile Ile Met 260 265 270 | | | 816 |
| tca gat gag caa tct aaa tta tat aat atg gca gaa aaa tat gat tat Ser Asp Glu Gln Ser Lys Leu Tyr Asn Met Ala Glu Lys Tyr Asp Tyr 275 280 285 | | | 864 |

| | |
|---|------|
| aaa act gaa tta ggt ggt tta aaa act atg aga aga tta ata tct tca | 912 |
| Lys Thr Glu Leu Gly Gly Leu Lys Thr Met Arg Arg Leu Ile Ser Ser | |
| 290 325 300 | |
| ttt gct ttt tat gat ctt aaa ata aaa gga gat tta gat aat ata gaa | 960 |
| Phe Ala Phe Tyr Asp Leu Lys Ile Lys Gly Asp Leu Asp Asn Ile Glu | |
| 305 310 315 320 | |
| tat aat gat atg att aaa aga aaa ctt gct gaa ttt tcc gag ttt aca | 1008 |
| Tyr Asn Asp Met Ile Lys Arg Lys Leu Ala Glu Phe Ser Glu Phe Thr | |
| 325 330 335 | |
| aaa aat att aat ttc tct gaa tct ttt att gaa agt ttt aaa aat gat | 1056 |
| Lys Asn Ile Asn Phe Ser Glu Ser Phe Ile Glu Ser Phe Lys Asn Asp | |
| 340 345 350 | |
| aat ata aaa ata aaa act aat tta cca atc act gat ata aat aat tat | 1104 |
| Asn Ile Lys Ile Lys Thr Asn Leu Pro Ile Thr Asp Ile Asn Asn Tyr | |
| 355 360 365 | |
| aat ata tta tat caa tat tcg tgt aaa tat ata gaa act tgt aaa ata | 1152 |
| Asn Ile Leu Tyr Gln Tyr Ser Cys Lys Tyr Ile Glu Thr Cys Lys Ile | |
| 370 375 380 | |
| att tta aat tcg aga gga aaa gta tta ata ttt gaa cct tta gtt aat | 1200 |
| Ile Leu Asn Ser Arg Gly Lys Val Leu Ile Phe Glu Pro Leu Val Asn | |
| 385 390 395 400 | |
| ttt gaa gga ata tca agt tta aaa tgt tat ttt aat tgt ttt aat att | 1248 |
| Phe Glu Gly Ile Ser Ser Leu Lys Cys Tyr Phe Asn Cys Phe Asn Ile | |
| 405 410 415 | |
| tct tat att gaa tat tct agc aaa act tta aaa act aga gat aat gaa | 1296 |
| Ser Tyr Ile Glu Tyr Ser Ser Lys Thr Leu Lys Thr Arg Asp Asn Glu | |
| 420 425 430 | |
| tta aac gaa tat aat aat tat gaa aat aat aat ggt aaa aaa gta aaa | 1344 |
| Leu Asn Glu Tyr Asn Asn Tyr Glu Asn Asn Asn Gly Lys Lys Val Lys | |
| 435 440 445 | |
| gtt tgc ata ttt tct tac gct gga tct gaa ggc ata tca ttc aaa tgt | 1392 |
| Val Cys Ile Phe Ser Tyr Ala Gly Ser Glu Gly Ile Ser Phe Lys Cys | |
| 450 455 460 | |
| att aat gat ata att ata tta gat atg ccg tgg aat gaa tca gaa tta | 1440 |
| Ile Asn Asp Ile Ile Ile Leu Asp Met Pro Trp Asn Glu Ser Glu Leu | |
| 465 470 475 480 | |
| aaa caa ata ata gga aga tct ata aga tta aat tct cat aaa gat tta | 1488 |
| Lys Gln Ile Ile Gly Arg Ser Ile Arg Leu Asn Ser His Lys Asp Leu | |
| 485 490 495 | |
| cca caa gaa tat aga tat gtt aac gtt cat ttt tta ata tca tat acc | 1536 |
| Pro Gln Glu Tyr Arg Tyr Val Asn Val His Phe Leu Ile Ser Tyr Thr | |
| 500 505 510 | |

| | |
|---|------|
| aac aac aga aaa tct gta gat aaa gaa ata tta gat att ata aaa gat | 1584 |
| Asn Asn Arg Lys Ser Val Asp Lys Glu Ile Leu Asp Ile Ile Lys Asp | |
| 515 520 525 | |
| aaa caa ggt aaa ata aat gtt ata ttt gat tta tta aaa tca tca tct | 1632 |
| Lys Gln Gly Lys Ile Asn Val Ile Phe Asp Leu Leu Lys Ser Ser Ser | |
| 530 535 540 | |
| atc gaa tct att cat aac aca tat aaa tat ata gaa cca gca gaa aat | 1680 |
| Ile Glu Ser Ile His Asn Thr Tyr Lys Tyr Ile Glu Pro Ala Glu Asn | |
| 545 550 555 560 | |
| gaa ata att ttt gac aca ata cgt aaa act aga atg aaa gaa atg aac | 1728 |
| Glu Ile Ile Phe Asp Thr Ile Arg Lys Thr Arg Met Lys Glu Met Asn | |
| 565 570 575 | |
| gta tct aat gtt att att aat ata aaa tta tat ccc ata tca tat tgt | 1776 |
| Val Ser Asn Val Ile Ile Asn Ile Lys Leu Tyr Pro Ile Ser Tyr Cys | |
| 580 585 590 | |
| aaa gat tat gat aga gcc act ata tta aaa ggt tta tta aac aaa gac | 1824 |
| Lys Asp Tyr Asp Arg Ala Thr Ile Leu Lys Gly Leu Leu Asn Lys Asp | |
| 595 600 605 | |
| aca aat ata gta tat aaa gat aat aca gct gta gca aaa tta atg att | 1872 |
| Thr Asn Ile Val Tyr Lys Asp Asn Thr Ala Val Ala Lys Leu Met Ile | |
| 610 615 620 | |
| gat aaa gac aat ata cct ata ttt ata ata gag aat gat aca tta ata | 1920 |
| Asp Lys Asp Asn Ile Pro Ile Phe Ile Ile Glu Asn Asp Thr Leu Ile | |
| 625 630 635 640 | |
| tat ata gca gat gat tat tat gaa tag | 1947 |
| Tyr Ile Ala Asp Asp Tyr Tyr Glu | |
| 645 | |

<210> 56

<211> 453

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (453)

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1           5           10           15

tat ata tca tat tat aat ata ttt ata tat ata cta gaa gaa tat att      96
Tyr Ile Ser Tyr Tyr Asn Ile Phe Ile Tyr Ile Leu Glu Glu Tyr Ile
           20           25           30

ata ata tta tat aat tat aaa tta ata tat ata ata aat aaa aat tat      144
Ile Ile Leu Tyr Asn Tyr Lys Leu Ile Tyr Ile Ile Asn Lys Asn Tyr
           35           40           45

ata caa tat atg tat tat aat tat tta ttt aaa aat aat ata tat tat      192
Ile Gln Tyr Met Tyr Tyr Asn Tyr Leu Phe Lys Asn Asn Ile Tyr Tyr
           50           55           60

aat tta aaa tta tat aat aat aat aaa tta tta aaa cat aaa ccg tcg      240
Asn Leu Lys Leu Tyr Asn Asn Asn Lys Leu Leu Lys His Lys Pro Ser
65           70           75           80

aaa aaa gta cgc ttt tca tcc gaa cca cca aaa ctc cac att atg tat      288
Lys Lys Val Arg Phe Ser Ser Glu Pro Pro Lys Leu His Ile Met Tyr
           85           90           95

gtt tgg tta tat gct gca aaa caa act cga aaa tta tac tgg gat aaa      336
Val Trp Leu Tyr Ala Ala Lys Gln Thr Arg Lys Leu Tyr Trp Asp Lys
           100          105          110

ttt gcg att gat aga cat aga ttc aaa aga aga att aat gat ata gat      384
Phe Ala Ile Asp Arg His Arg Phe Lys Arg Arg Ile Asn Asp Ile Asp
           115          120          125

ata tca ata tct tgg gtt tta act cca cat cac aga cat aaa att atg      432
Ile Ser Ile Ser Trp Val Leu Thr Pro His His Arg His Lys Ile Met
           130          135          140

aaa cat ctt aag tta ata taa      453
Lys His Leu Lys Leu Ile
145           150

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<210> 57

<211> 900

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (900)

<223>

<400> 57

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|---|-----|
| atg gac gaa aca ata aat ttt aat aat aaa tca tgg gaa ata aaa aat | 48 |
| Met Asp Glu Thr Ile Asn Phe Asn Asn Lys Ser Trp Glu Ile Lys Asn | |
| 1 5 10 15 | |
| tta ata gct aaa ggt ggt ttt gga aca gta tat aaa tta tgc gaa aaa | 96 |
| Leu Ile Ala Lys Gly Gly Phe Gly Thr Val Tyr Lys Leu Cys Glu Lys | |
| 20 25 30 | |
| aat gat aat aat aac tgt tac gct att aaa ata gaa cca tcg gat aat | 144 |
| Asn Asp Asn Asn Asn Cys Tyr Ala Ile Lys Ile Glu Pro Ser Asp Asn | |
| 35 40 45 | |
| ggt ccg ttg ttt gta gaa atg cac ttt tat aaa aaa ata aat aaa aat | 192 |
| Gly Pro Leu Phe Val Glu Met His Phe Tyr Lys Lys Ile Asn Lys Asn | |
| 50 55 60 | |
| gaa ata aaa aat ttt att gat gcg aaa aat tta agt tat tta gga ata | 240 |
| Glu Ile Lys Asn Phe Ile Asp Ala Lys Asn Leu Ser Tyr Leu Gly Ile | |
| 65 70 75 80 | |
| cca tta cta tat cat aat ggt att ata aaa aaa gat aat ata gaa tat | 288 |
| Pro Leu Leu Tyr His Asn Gly Ile Ile Lys Lys Asp Asn Ile Glu Tyr | |
| 85 90 95 | |
| aga tat ata gta ata gat tat tat gaa ttt aat tta aat gat ata tta | 336 |
| Arg Tyr Ile Val Ile Asp Tyr Tyr Glu Phe Asn Leu Asn Asp Ile Leu | |
| 100 105 110 | |
| aaa aaa tat ata aaa tta cct ata ata aca ata tat aaa ata act ata | 384 |
| Lys Lys Tyr Ile Lys Leu Pro Ile Ile Thr Ile Tyr Lys Ile Thr Ile | |
| 115 120 125 | |
| caa ata tta tat ata tta gaa tat tta cac aaa aaa aaa tat aca cac | 432 |
| Gln Ile Leu Tyr Ile Leu Glu Tyr Leu His Lys Lys Lys Tyr Thr His | |
| 130 135 140 | |
| aat gat ata aaa aaa aat aat ata atg ttt aat tca tca tta act aaa | 480 |
| Asn Asp Ile Lys Lys Asn Asn Ile Met Phe Asn Ser Ser Leu Thr Lys | |
| 145 150 155 160 | |
| gta tat tta ata gat tac gga cta ata tat aat atg aat tct aat caa | 528 |
| Val Tyr Leu Ile Asp Tyr Gly Leu Ile Tyr Asn Met Asn Ser Asn Gln | |
| 165 170 175 | |
| gaa tat aat ata aaa tgt agt aat gat gga act cta gaa tat tta cca | 576 |
| Glu Tyr Asn Ile Lys Cys Ser Asn Asp Gly Thr Leu Glu Tyr Leu Pro | |
| 180 185 190 | |
| tta ata act cat tta ttt ggc tta aaa aca tac atg gga gat ata gag | 624 |
| Leu Ile Thr His Leu Phe Gly Leu Lys Thr Tyr Met Gly Asp Ile Glu | |

| 195 | 200 | 205 | |
|---|-----|-----|-----|
| tct ctg atg tat aat att att gaa tgg tat agt gga agt ttg cct tgg | | | 672 |
| Ser Leu Met Tyr Asn Ile Ile Glu Trp Tyr Ser Gly Ser Leu Pro Trp | | | |
| 210 | 215 | 220 | |
| att aaa tat aaa aaa aaa aat gtt ata tta aaa aaa tta gat ttt ttc | | | 720 |
| Ile Lys Tyr Lys Lys Lys Asn Val Ile Leu Lys Lys Leu Asp Phe Phe | | | |
| 225 | 230 | 235 | 240 |
| aac act tgt tta act aat tca cca att gaa ata tgt aaa tta tat aat | | | 768 |
| Asn Thr Cys Leu Thr Asn Ser Pro Ile Glu Ile Cys Lys Leu Tyr Asn | | | |
| | 245 | 250 | 255 |
| tat ata aaa aat gct cct tct ata tat aat tat aat ttt ata cct gat | | | 816 |
| Tyr Ile Lys Asn Ala Pro Ser Ile Tyr Asn Tyr Asn Phe Ile Pro Asp | | | |
| | 260 | 265 | 270 |
| cat gat aaa tta att aat tat ttt gta act tat tta aaa tct aaa aat | | | 864 |
| His Asp Lys Leu Ile Asn Tyr Phe Val Thr Tyr Leu Lys Ser Lys Asn | | | |
| | 275 | 280 | 285 |
| ata aat tta aat gat aaa tta gtt ttt tgt aaa taa | | | 900 |
| Ile Asn Leu Asn Asp Lys Leu Val Phe Cys Lys | | | |
| 290 | 295 | | |

<210> 58

<211> 1599

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (1599)

<223>

<400> 58

| | | | |
|---|----|----|-----|
| atg aat cat att aaa aaa att tta aaa ata aaa agt gat aaa gat ata | | | 48 |
| Met Asn His Ile Lys Lys Ile Leu Lys Ile Lys Ser Asp Lys Asp Ile | | | |
| 1 | 5 | 10 | 15 |
| tta aat tac ata gat gca tta aat tat aat gat tta gaa aat ata ata | | | 96 |
| Leu Asn Tyr Ile Asp Ala Leu Asn Tyr Asn Asp Leu Glu Asn Ile Ile | | | |
| | 20 | 25 | 30 |
| cag aca tta gat aat agt tat tat gat aaa gaa gct tta att agt gat | | | 144 |

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Gln | Thr | Leu | Asp | Asn | Ser | Tyr | Tyr | Asp | Lys | Glu | Ala | Leu | Ile | Ser | Asp | | |
| | | 35 | | | | | 40 | | | | | 45 | | | | | |
| aaa | aaa | tat | gat | tta | ata | aga | aat | ttt | ata | aat | aat | aag | tat | cct | aat | 192 | |
| Lys | Lys | Tyr | Asp | Leu | Ile | Arg | Asn | Phe | Ile | Asn | Asn | Lys | Tyr | Pro | Asn | | |
| | 50 | | | | | 55 | | | | 60 | | | | | | | |
| gaa | tct | ttg | tgt | aaa | aaa | ata | ggg | tat | act | ccg | gaa | gat | aaa | gta | cga | 240 | |
| Glu | Ser | Leu | Cys | Lys | Lys | Ile | Gly | Tyr | Thr | Pro | Glu | Asp | Lys | Val | Arg | | |
| 65 | | | | | 70 | | | | 75 | | | | | 80 | | | |
| tta | aag | tat | ttt | atg | ggg | agt | gaa | aat | aaa | act | tat | aaa | tca | gat | aat | 288 | |
| Leu | Lys | Tyr | Phe | Met | Gly | Ser | Glu | Asn | Lys | Thr | Tyr | Lys | Ser | Asp | Asn | | |
| | | | | 85 | | | | 90 | | | | | | 95 | | | |
| aaa | tta | tta | agt | tgg | ata | aac | gaa | tat | cat | act | aat | ata | tta | gta | tta | 336 | |
| Lys | Leu | Leu | Ser | Trp | Ile | Asn | Glu | Tyr | His | Thr | Asn | Ile | Leu | Val | Leu | | |
| | | | 100 | | | | | 105 | | | | | 110 | | | | |
| tct | gca | aaa | gca | gac | gga | ata | tca | gta | tta | tgg | gat | ata | aaa | aat | aat | 384 | |
| Ser | Ala | Lys | Ala | Asp | Gly | Ile | Ser | Val | Leu | Trp | Asp | Ile | Lys | Asn | Asn | | |
| | | 115 | | | | | | 120 | | | | 125 | | | | | |
| aaa | ata | tat | agt | aga | ggg | gat | ggg | aaa | tat | gga | aaa | gat | ata | aca | cat | 432 | |
| Lys | Ile | Tyr | Ser | Arg | Gly | Asp | Gly | Lys | Tyr | Gly | Lys | Asp | Ile | Thr | His | | |
| | 130 | | | | | 135 | | | | | 140 | | | | | | |
| ttt | att | aat | tat | ttt | aat | ttt | tca | gat | gat | aaa | aat | ata | aat | aac | aat | 480 | |
| Phe | Ile | Asn | Tyr | Phe | Asn | Phe | Ser | Asp | Asp | Lys | Asn | Ile | Asn | Asn | Asn | | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | | |
| gat | ata | ttt | aaa | aat | aat | ata | aat | ttt | gtt | aga | ggg | gaa | tta | gtt | ata | 528 | |
| Asp | Ile | Phe | Lys | Asn | Asn | Ile | Asn | Phe | Val | Arg | Gly | Glu | Leu | Val | Ile | | |
| | | | | 165 | | | | | 170 | | | | | 175 | | | |
| gat | aaa | cct | gaa | aat | aga | aat | ata | gta | gca | ggg | caa | ata | aat | aga | aat | 576 | |
| Asp | Lys | Pro | Glu | Asn | Arg | Asn | Ile | Val | Ala | Gly | Gln | Ile | Asn | Arg | Asn | | |
| | | | 180 | | | | | 185 | | | | | 190 | | | | |
| gaa | att | gat | aaa | gaa | acc | gca | tta | aaa | ata | tat | ttt | gta | gca | tac | gaa | 624 | |
| Glu | Ile | Asp | Lys | Glu | Thr | Ala | Leu | Lys | Ile | Tyr | Phe | Val | Ala | Tyr | Glu | | |
| | | 195 | | | | | 200 | | | | | 205 | | | | | |
| ata | tta | gaa | cca | aga | atg | aca | caa | ctc | gaa | caa | ttt | cac | aaa | ctt | aca | 672 | |
| Ile | Leu | Glu | Pro | Arg | Met | Thr | Gln | Leu | Glu | Gln | Phe | His | Lys | Leu | Thr | | |
| | | 210 | | | | 215 | | | | | 220 | | | | | | |
| gag | aat | agt | ata | aga | act | gtt | aaa | tat | gat | tct | gtt | gat | tat | aat | att | 720 | |
| Glu | Asn | Ser | Ile | Arg | Thr | Val | Lys | Tyr | Asp | Ser | Val | Asp | Tyr | Asn | Ile | | |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 | | |
| tca | tac | gaa | caa | tta | agt | gaa | ata | tat | aat | aat | tat | acg | caa | gaa | tta | 768 | |
| Ser | Tyr | Glu | Gln | Leu | Ser | Glu | Ile | Tyr | Asn | Asn | Tyr | Thr | Gln | Glu | Leu | | |
| | | | | 245 | | | | | 250 | | | | | 255 | | | |
| tcg | tat | tac | ata | gat | ggg | att | ata | ata | aga | aat | aat | aat | tta | aat | cca | 816 | |
| Ser | Tyr | Tyr | Ile | Asp | Gly | Ile | Ile | Ile | Arg | Asn | Asn | Asn | Leu | Asn | Pro | | |

| 260 | 265 | 270 | |
|---|-----|-----|------|
| ggt att aaa tct ggt aat cca cct tgg tca ata tgt ttt aag gaa aca Val Ile Lys Ser Gly Asn Pro Pro Trp Ser Ile Cys Phe Lys Glu Thr 275 280 285 | | | 864 |
| gat aaa ata tat att act act gtt aaa gaa atc aaa tgg gat ata tca Asp Lys Ile Tyr Ile Thr Thr Val Lys Glu Ile Lys Trp Asp Ile Ser 290 295 300 | | | 912 |
| aaa aaa aat ata tat ata cct aaa gca ata tta gag cct ata att ata Lys Lys Asn Ile Tyr Ile Pro Lys Ala Ile Leu Glu Pro Ile Ile Ile 305 310 315 320 | | | 960 |
| gat aat tcg act att aat gct gtt gct tgt cac aat gct aaa tat gta Asp Asn Ser Thr Ile Asn Ala Val Ala Cys His Asn Ala Lys Tyr Val 325 330 335 | | | 1008 |
| att gat aaa aaa att aac act ggt tca ata gta gaa ata gta aag aaa Ile Asp Lys Lys Ile Asn Thr Gly Ser Ile Val Glu Ile Val Lys Lys 340 345 350 | | | 1056 |
| ggt gga gtt ata ccg ata att aat aat gta ata aaa gaa tca gat ata Gly Gly Val Ile Pro Ile Ile Asn Asn Val Ile Lys Glu Ser Asp Ile 355 360 365 | | | 1104 |
| gaa att ata tta ccc gat ggt att tta tct ggt gta aat att ata ttt Glu Ile Ile Leu Pro Asp Gly Ile Leu Ser Gly Val Asn Ile Ile Phe 370 375 380 | | | 1152 |
| act ggt gtt aac aaa gaa agt gaa att aaa aga ata tta tac ttt ttt Thr Gly Val Asn Lys Glu Ser Glu Ile Lys Arg Ile Leu Tyr Phe Phe 385 390 395 400 | | | 1200 |
| aaa tca ttt gga tat aaa aat att aat aaa aca ata att gat aaa tta Lys Ser Phe Gly Tyr Lys Asn Ile Asn Lys Thr Ile Ile Asp Lys Leu 405 410 415 | | | 1248 |
| tat atg tta gga tat gta aat ata tta aaa tat tta gaa aaa gat att Tyr Met Leu Gly Tyr Val Asn Ile Leu Lys Tyr Leu Glu Lys Asp Ile 420 425 430 | | | 1296 |
| aat ata gaa gaa tat aat aat aaa aaa act tat att aaa tta ttg gaa Asn Ile Glu Glu Tyr Asn Asn Lys Lys Thr Tyr Ile Lys Leu Leu Glu 435 440 445 | | | 1344 |
| gta att aaa gat ata aaa agt aaa aat tat aat atc gta gac ata tta Val Ile Lys Asp Ile Lys Ser Lys Asn Tyr Asn Ile Val Asp Ile Leu 450 455 460 | | | 1392 |
| aca gca tta tct cta gat agt ata tca aaa tca aga gtt tgt gct att Thr Ala Leu Ser Leu Asp Ser Ile Ser Lys Ser Arg Val Cys Ala Ile 465 470 475 480 | | | 1440 |
| tat aat gag ttt cca gat ttt ttg aaa gat aaa aat gaa aaa gat tat Tyr Asn Glu Phe Pro Asp Phe Leu Lys Asp Lys Asn Glu Lys Asp Tyr 485 490 495 | | | 1488 |

agt tca ata aac ggt att gga aaa tct ata tca aaa aaa att aat gat 1536
 Ser Ser Ile Asn Gly Ile Gly Lys Ser Ile Ser Lys Lys Ile Asn Asp
 500 505 510

aat att ata aat aat tac gaa tat ata ata aat att tta aac gct tta 1584
 Asn Ile Ile Asn Asn Tyr Glu Tyr Ile Ile Asn Ile Leu Asn Ala Leu
 515 520 525

aat ata aag tat taa 1599
 Asn Ile Lys Tyr
 530

<210> 59

<211> 687

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (687)

<223>

<400> 59
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 1 5 10 15

aaa aat aaa gat ata tat tca tgt tgt gat tgc tca aat tgt tat aca 96
 Lys Asn Lys Asp Ile Tyr Ser Cys Cys Asp Cys Ser Asn Cys Tyr Thr
 20 25 30

aca tcg tca aaa aga ata aca aca ata agt agt gct tca aac aat aaa 144
 Thr Ser Ser Lys Arg Ile Thr Thr Ile Ser Ser Ala Ser Asn Asn Lys
 35 40 45

act ata cat tgt aat aat gtt tta aaa gaa ata tca aat acc agt att 192
 Thr Ile His Cys Asn Asn Val Leu Lys Glu Ile Ser Asn Thr Ser Ile
 50 55 60

tca tat gat ata gta gat ggt ttt cta aaa cta atc aat gat aat aat 240
 Ser Tyr Asp Ile Val Asp Gly Phe Leu Lys Leu Ile Asn Asp Asn Asn
 65 70 75 80

tta aat aca aaa agt ata aca act gcg tta ggt tct gaa tat tta aaa 288
 Leu Asn Thr Lys Ser Ile Thr Thr Ala Leu Gly Ser Glu Tyr Leu Lys

| 85 | | | | | | | | | | 90 | | | | | 95 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|-----|
| tca | aaa | ggt | ata | aaa | aat | tat | aga | act | acg | cat | aaa | tta | att | aat | atg | 336 | | | | |
| Ser | Lys | Gly | Ile | Lys | Asn | Tyr | Arg | Thr | Thr | His | Lys | Leu | Ile | Asn | Met | | | | | |
| 100 | | | | | | | | | | 105 | | | | | 110 | | | | | |
| tct | cta | tcg | gat | ggt | aat | aat | tgt | ata | tta | act | aaa | gac | gat | atc | ttt | 384 | | | | |
| Ser | Leu | Ser | Asp | Gly | Asn | Asn | Cys | Ile | Leu | Thr | Lys | Asp | Asp | Ile | Phe | | | | | |
| 115 | | | | | | | | | | 120 | | | | | 125 | | | | | |
| aga | att | aat | ata | att | ttt | gag | gat | ttt | aca | caa | ttt | ata | tat | aaa | aat | 432 | | | | |
| Arg | Ile | Asn | Ile | Ile | Phe | Glu | Asp | Phe | Thr | Gln | Phe | Ile | Tyr | Lys | Asn | | | | | |
| 130 | | | | | | | | | | 135 | | | | | 140 | | | | | |
| aat | tat | aca | aaa | act | ata | tct | tac | gaa | ttc | tgt | tta | gat | aga | ata | ttt | 480 | | | | |
| Asn | Tyr | Thr | Lys | Thr | Ile | Ser | Tyr | Glu | Phe | Cys | Leu | Asp | Arg | Ile | Phe | | | | | |
| 145 | | | | | | | | | | 150 | | | | | 155 | | | | | 160 |
| gat | att | ctt | aat | ata | aat | tat | gta | ata | aat | ttc | aat | tat | agc | aaa | cta | 528 | | | | |
| Asp | Ile | Leu | Asn | Ile | Asn | Tyr | Val | Ile | Asn | Phe | Asn | Tyr | Ser | Lys | Leu | | | | | |
| 165 | | | | | | | | | | 170 | | | | | 175 | | | | | |
| aat | aaa | aga | gac | gat | aaa | cca | gaa | ata | tgg | aat | aaa | tat | ata | att | gaa | 576 | | | | |
| Asn | Lys | Arg | Asp | Asp | Lys | Pro | Glu | Ile | Trp | Asn | Lys | Tyr | Ile | Ile | Glu | | | | | |
| 180 | | | | | | | | | | 185 | | | | | 190 | | | | | |
| tta | tat | aat | aaa | tca | ttg | att | aaa | tct | aat | aat | aaa | ttt | ata | ttt | aga | 624 | | | | |
| Leu | Tyr | Asn | Lys | Ser | Leu | Ile | Lys | Ser | Asn | Asn | Lys | Phe | Ile | Phe | Arg | | | | | |
| 195 | | | | | | | | | | 200 | | | | | 205 | | | | | |
| cca | aat | aat | att | att | ttt | aat | gaa | tat | ata | aaa | aat | aat | ata | tgt | ttg | 672 | | | | |
| Pro | Asn | Asn | Ile | Ile | Phe | Asn | Glu | Tyr | Ile | Lys | Asn | Asn | Ile | Cys | Leu | | | | | |
| 210 | | | | | | | | | | 215 | | | | | 220 | | | | | |
| cgt | aat | att | att | taa | | | | | | | | | | | | 687 | | | | |
| Arg | Asn | Ile | Ile | | | | | | | | | | | | | | | | | |
| 225 | | | | | | | | | | | | | | | | | | | | |

<210> 60

<211> 3906

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (3906)

<223>

<400> 60

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 Met Thr Thr Phe Lys Tyr Thr Leu Leu Asp Asn Ser Thr Ile Asp Ala
 1 5 10 15

att cca ata gtt att gat tct att gga aat gat aac gaa aat agt gta 96
 Ile Pro Ile Val Ile Asp Ser Ile Gly Asn Asp Asn Glu Asn Ser Val
 20 25 30

aaa agt cct aaa tta ggc gga act aaa ttc aat gtg tgt tcg aca tgc 144
 Lys Ser Pro Lys Leu Gly Gly Thr Lys Phe Asn Val Cys Ser Thr Cys
 35 40 45

aat tta aca aga gaa aat ggc gac atg ggt cat cca gga aga act cct 192
 Asn Leu Thr Arg Glu Asn Gly Asp Met Gly His Pro Gly Arg Thr Pro
 50 55 60

tta aga gat atg tgt att gta aaa tct ggt tgt att aaa aat gtt ttg 240
 Leu Arg Asp Met Cys Ile Val Lys Ser Gly Cys Ile Lys Asn Val Leu
 65 70 75 80

gat aca cta aat aca tta aaa tta tgt aat agt tgt ttt atg ata aaa 288
 Asp Thr Leu Asn Thr Leu Lys Leu Cys Asn Ser Cys Phe Met Ile Lys
 85 90 95

aat aat aca ata ttt tca gaa ata att gaa aaa tat aat agc gaa tat 336
 Asn Asn Thr Ile Phe Ser Glu Ile Ile Glu Lys Tyr Asn Ser Glu Tyr
 100 105 110

aat att aat tta aaa aaa gaa ata tta tca tta tta aaa aac aat cgc 384
 Asn Ile Asn Leu Lys Lys Glu Ile Leu Ser Leu Leu Lys Asn Asn Arg
 115 120 125

caa ggt ggg gta aaa tgt aat aat gaa aat tgt caa aat ata aca gga 432
 Gln Gly Gly Val Lys Cys Asn Asn Glu Asn Cys Gln Asn Ile Thr Gly
 130 135 140

aca tat aaa tat aat caa aaa aaa tca tat ttt tac gta aaa aaa caa 480
 Thr Tyr Lys Tyr Asn Gln Lys Lys Ser Tyr Phe Tyr Val Lys Lys Gln
 145 150 155 160

aaa gat gaa atc att ctt aat aaa aca gtt tat act atg tta ctt gga 528
 Lys Asp Glu Ile Ile Leu Asn Lys Thr Val Tyr Thr Met Leu Leu Gly
 165 170 175

att cct gat ata att tat aaa tgt gtt act gta cca tac gca gat tct 576
 Ile Pro Asp Ile Ile Tyr Lys Cys Val Thr Val Pro Tyr Ala Asp Ser
 180 185 190

caa tta caa cct tat aaa gca ttt tac gct aat aat att ata att cct 624
 Gln Leu Gln Pro Tyr Lys Ala Phe Tyr Ala Asn Asn Ile Ile Ile Pro
 195 200 205

gta tta cca tct aga cct cca aat tat ttt gat aat aaa gaa tct cat 672
 Val Leu Pro Ser Arg Pro Pro Asn Tyr Phe Asp Asn Lys Glu Ser His

| 210 | 215 | 220 | |
|---|-----|-----|------|
| gtt atg aca aca aaa ttg ggt caa tta gtt ggc aca tca caa aaa tct | | | 720 |
| Val Met Thr Thr Lys Leu Gly Gln Leu Val Gly Thr Ser Gln Lys Ser | | | |
| 225 | 230 | 235 | 240 |
| aga gat gaa agt gaa gtt caa aaa ata tat aat gat att gat aat gtt | | | 768 |
| Arg Asp Glu Ser Glu Val Gln Lys Ile Tyr Asn Asp Ile Asp Asn Val | | | |
| 245 | 250 | | 255 |
| aaa cca aat tct cca tat aaa act agt aac atg tta gtt acg tta aat | | | 816 |
| Lys Pro Asn Ser Pro Tyr Lys Thr Ser Asn Met Leu Val Thr Leu Asn | | | |
| 260 | 265 | | 270 |
| ata caa gtt ggt ggt aac aaa aaa gga agt ata gtt aga tct aat ata | | | 864 |
| Ile Gln Val Gly Gly Asn Lys Lys Gly Ser Ile Val Arg Ser Asn Ile | | | |
| 275 | 280 | | 285 |
| atg gct aga aga gcc gat aac aca gct aga tgt gta gct ggt cca act | | | 912 |
| Met Ala Arg Arg Ala Asp Asn Thr Ala Arg Cys Val Ala Gly Pro Thr | | | |
| 290 | 295 | | 300 |
| atg gac aaa ata gga tat ata tat ata cca aaa ata gtg gct aag aca | | | 960 |
| Met Asp Lys Ile Gly Tyr Ile Tyr Ile Pro Lys Ile Val Ala Lys Thr | | | |
| 305 | 310 | | 315 |
| 320 | | | |
| tta aca tca tca ata tat tat aat aga ttt act gaa aat atg att aaa | | | 1008 |
| Leu Thr Ser Ser Ile Tyr Tyr Asn Arg Phe Thr Glu Asn Met Ile Lys | | | |
| 325 | 330 | | 335 |
| gat atg tta gtt aat gat aat aac aaa att aaa tat ata tta tta tat | | | 1056 |
| Asp Met Leu Val Asn Asp Asn Asn Lys Ile Lys Tyr Ile Leu Leu Tyr | | | |
| 340 | 345 | | 350 |
| aga tat gat caa tta aaa ccc aca aca tta tta aaa ata aaa cca caa | | | 1104 |
| Arg Tyr Asp Gln Leu Lys Pro Thr Thr Leu Leu Lys Ile Lys Pro Gln | | | |
| 355 | 360 | | 365 |
| tct aga ctc aat aat tta tta aaa atg aaa tat gga gat aga ata gaa | | | 1152 |
| Ser Arg Leu Asn Asn Leu Leu Lys Met Lys Tyr Gly Asp Arg Ile Glu | | | |
| 370 | 375 | | 380 |
| gtt gaa tta gaa gat aat gat gta ata tta ttt agt aga caa cca tct | | | 1200 |
| Val Glu Leu Glu Asp Asn Asp Val Ile Leu Phe Ser Arg Gln Pro Ser | | | |
| 385 | 390 | | 395 |
| 400 | | | |
| tta cat aaa ttt aat att cag gca ggt ata tgt aaa ata tgg gat aat | | | 1248 |
| Leu His Lys Phe Asn Ile Gln Ala Gly Ile Cys Lys Ile Trp Asp Asn | | | |
| 405 | 410 | | 415 |
| aat aca ata gca aca cct acg ccg ata gca aat tct atg aat tta gat | | | 1296 |
| Asn Thr Ile Ala Thr Pro Thr Pro Ile Ala Asn Ser Met Asn Leu Asp | | | |
| 420 | 425 | | 430 |
| tat gat ggt gat gaa atg aat gta tat aaa tta aaa tca tct gtg tca | | | 1344 |
| Tyr Asp Gly Asp Glu Met Asn Val Tyr Lys Leu Lys Ser Ser Val Ser | | | |
| 435 | 440 | | 445 |

| | |
|---|------|
| gta gaa tca tta ttt act atg tta tct gtt aat atg att aaa aat aat | 1392 |
| Val Glu Ser Leu Phe Thr Met Leu Ser Val Asn Met Ile Lys Asn Asn | |
| 450 455 460 | |
| tat aat ttt tcg cca ata ttt ggg tta att caa gat caa ata ata tca | 1440 |
| Tyr Asn Phe Ser Pro Ile Phe Gly Leu Ile Gln Asp Gln Ile Ile Ser | |
| 465 470 475 480 | |
| gta cat atg ata tat aat att aaa gaa ttt tct cta caa gat gtt att | 1488 |
| Val His Met Ile Tyr Asn Ile Lys Glu Phe Ser Leu Gln Asp Val Ile | |
| 485 490 495 | |
| tat att tta gga gaa tat agt tat tat ata aga gat ata aat aaa aaa | 1536 |
| Tyr Ile Leu Gly Glu Tyr Ser Tyr Tyr Ile Arg Asp Ile Asn Lys Lys | |
| 500 505 510 | |
| aca tat tct gga aaa gaa tta tta tca tta tta ttt cca gat aat ctt | 1584 |
| Thr Tyr Ser Gly Lys Glu Leu Leu Ser Leu Leu Phe Pro Asp Asn Leu | |
| 515 520 525 | |
| aca tat gaa ggt atg ttt gat aat ggt aaa att aca tta tct aat ata | 1632 |
| Thr Tyr Glu Gly Met Phe Asp Asn Gly Lys Ile Thr Leu Ser Asn Ile | |
| 530 535 540 | |
| tca tct aaa caa gtt gta gct cag tca tat gaa tca ttt tca aat att | 1680 |
| Ser Ser Lys Gln Val Val Ala Gln Ser Tyr Glu Ser Phe Ser Asn Ile | |
| 545 550 555 560 | |
| cta tct caa tta aaa aat aat att tat gct gtg tat ttt ata gat gta | 1728 |
| Leu Ser Gln Leu Lys Asn Asn Ile Tyr Ala Val Tyr Phe Ile Asp Val | |
| 565 570 575 | |
| ata tta tat gta gct aga aat ttt ata aat ttg tat agt ttt agc gtt | 1776 |
| Ile Leu Tyr Val Ala Arg Asn Phe Ile Asn Leu Tyr Ser Phe Ser Val | |
| 580 585 590 | |
| tcg tta aaa gat att att cca gat ata tat ttt att gac gat gtt caa | 1824 |
| Ser Leu Lys Asp Ile Ile Pro Asp Ile Tyr Phe Ile Asp Asp Val Gln | |
| 595 600 605 | |
| gaa tac att aat aat tgt tgt aaa gtt ata caa tat gtt gcg cta caa | 1872 |
| Glu Tyr Ile Asn Asn Cys Cys Lys Val Ile Gln Tyr Val Ala Leu Gln | |
| 610 615 620 | |
| tat tat att aaa aaa gat cat ata ata aaa tta act tat gat gaa atg | 1920 |
| Tyr Tyr Ile Lys Lys Asp His Ile Ile Lys Leu Thr Tyr Asp Glu Met | |
| 625 630 635 640 | |
| gaa aat ata aga ata caa aac ggt aat aat ata ata tct aat gtt aaa | 1968 |
| Glu Asn Ile Arg Ile Gln Asn Gly Asn Asn Ile Ile Ser Asn Val Lys | |
| 645 650 655 | |
| aat aaa ata aat aat cta ttt aaa gat gag aaa tta aat act ata atg | 2016 |
| Asn Lys Ile Asn Asn Leu Phe Lys Asp Glu Lys Leu Asn Thr Ile Met | |
| 660 665 670 | |

| | |
|---|------|
| atg atg aaa aat tca ggc tat aaa ata aca tta gat gaa tta gta aca | 2064 |
| Met Met Lys Asn Ser Gly Tyr Lys Ile Thr Leu Asp Glu Leu Val Thr | |
| 675 680 685 | |
| gtg ttg ggt tgt act gga caa caa gga att gat tca gat gat ata ccg | 2112 |
| Val Leu Gly Cys Thr Gly Gln Gln Gly Ile Asp Ser Asp Asp Ile Pro | |
| 690 695 700 | |
| aaa ccc gga att atg gga aga gta ttt gat tca aca tta cct gga agt | 2160 |
| Lys Pro Gly Ile Met Gly Arg Val Phe Asp Ser Thr Leu Pro Gly Ser | |
| 705 710 715 720 | |
| tta gac ata gaa tca tta gga tat gta aaa tca tca act ata aaa ggt | 2208 |
| Leu Asp Ile Glu Ser Leu Gly Tyr Val Lys Ser Ser Thr Ile Lys Gly | |
| 725 730 735 | |
| tta aaa ttc gaa gaa ttg gca ttt cat aca aaa tac aat tca att aaa | 2256 |
| Leu Lys Phe Glu Glu Leu Ala Phe His Thr Lys Tyr Asn Ser Ile Lys | |
| 740 745 750 | |
| aaa ata tta aaa ata aca tgc gag aca tca tcg gca ggt agt att ggt | 2304 |
| Lys Ile Leu Lys Ile Thr Cys Glu Thr Ser Ser Ala Gly Ser Ile Gly | |
| 755 760 765 | |
| aga aaa tta gtt aaa ttt atg gaa ggt gtt aaa gta gat cat ttg ggt | 2352 |
| Arg Lys Leu Val Lys Phe Met Glu Gly Val Lys Val Asp His Leu Gly | |
| 770 775 780 | |
| aga tcc gta tta aat aat gat att ata tgg tat aat aca aat cat att | 2400 |
| Arg Ser Val Leu Asn Asn Asp Ile Ile Trp Tyr Asn Thr Asn His Ile | |
| 785 790 795 800 | |
| aaa atg aca ggt ggt gat ata tct aaa gta gaa ata tta act cct agt | 2448 |
| Lys Met Thr Gly Gly Asp Ile Ser Lys Val Glu Ile Leu Thr Pro Ser | |
| 805 810 815 | |
| tta gaa atg gta aat tac aca ctt ata aaa gaa ata tat aac gaa aat | 2496 |
| Leu Glu Met Val Asn Tyr Thr Leu Ile Lys Glu Ile Tyr Asn Glu Asn | |
| 820 825 830 | |
| aaa aaa tat tta tta act aat ttt aat act gaa ata aat aaa gaa ttt | 2544 |
| Lys Lys Tyr Leu Leu Thr Asn Phe Asn Thr Glu Ile Asn Lys Glu Phe | |
| 835 840 845 | |
| att ttt cca att aat ata aaa tta gag att caa tca ttt tat aat aaa | 2592 |
| Ile Phe Pro Ile Asn Ile Lys Leu Glu Ile Gln Ser Phe Tyr Asn Lys | |
| 850 855 860 | |
| aaa tca act cct ata tct gat ata gat gca tta aaa tta att gat gaa | 2640 |
| Lys Ser Thr Pro Ile Ser Asp Ile Asp Ala Leu Lys Leu Ile Asp Glu | |
| 865 870 875 880 | |
| ttt ata gaa tat gtc tat att aat ata tat ttt tac aac att aca ata | 2688 |
| Phe Ile Glu Tyr Val Tyr Ile Asn Ile Tyr Phe Tyr Asn Ile Thr Ile | |
| 885 890 895 | |
| gat tgg ttt aaa tat att tta tat aca tat cta gat aga aat aca gta | 2736 |

| | | | | | | | | | | | | | | | | |
|-----|------|-----|-----|-----|-----|------|------|-----|-----|-----|------|------|-----|-----|-----|------|
| Asp | Trp | Phe | Lys | Tyr | Ile | Leu | Tyr | Thr | Tyr | Leu | Asp | Arg | Asn | Thr | Val | |
| | | | 900 | | | | | 905 | | | | | 910 | | | |
| gaa | aaa | tat | aat | aaa | aaa | tat | tct | aaa | gaa | tta | tta | aat | tat | ata | ata | 2784 |
| Glu | Lys | Tyr | Asn | Lys | Lys | Tyr | Ser | Lys | Glu | Leu | Leu | Asn | Tyr | Ile | Ile | |
| | | 915 | | | | | 920 | | | | | 925 | | | | |
| aat | aaa | att | aaa | tta | aaa | tta | cta | aat | tca | tta | aat | cca | ggt | tat | cct | 2832 |
| Asn | Lys | Ile | Lys | Leu | Lys | Leu | Leu | Asn | Ser | Leu | Asn | Pro | Gly | Tyr | Pro | |
| | | 930 | | | | 935 | | | | | 940 | | | | | |
| att | gga | tta | gaa | tac | gca | aat | aat | att | caa | gaa | aaa | ttt | aca | caa | caa | 2880 |
| Ile | Gly | Leu | Glu | Tyr | Ala | Asn | Asn | Ile | Gln | Glu | Lys | Phe | Thr | Gln | Gln | |
| 945 | | | | | 950 | | | | | 955 | | | | | 960 | |
| tca | tta | tcg | tct | ttt | cac | act | act | aaa | aaa | tca | gga | aca | gca | tca | acc | 2928 |
| Ser | Leu | Ser | Ser | Phe | His | Thr | Thr | Lys | Lys | Ser | Gly | Thr | Ala | Ser | Thr | |
| | | | | 965 | | | | 970 | | | | | 975 | | | |
| caa | tta | gga | ttt | tcg | gat | ttt | aaa | gat | act | gta | gaa | ttg | agt | aaa | aaa | 2976 |
| Gln | Leu | Gly | Phe | Ser | Asp | Phe | Lys | Asp | Thr | Val | Glu | Leu | Ser | Lys | Lys | |
| | | | 980 | | | | 985 | | | | | 990 | | | | |
| aat | aaa | aga | gat | att | gta | att | gct | ttt | aca | aca | cac | aga | tat | aaa | tta | 3024 |
| Asn | Lys | Arg | Asp | Ile | Val | Ile | Ala | Phe | Thr | Thr | His | Arg | Tyr | Lys | Leu | |
| | | 995 | | | | | 1000 | | | | | 1005 | | | | |
| gaa | gat | att | aag | aag | caa | atg | gaa | tac | ttg | tgt | tta | aag | aat | ttt | | 3069 |
| Glu | Asp | Ile | Lys | Lys | Gln | Met | Glu | Tyr | Leu | Cys | Leu | Lys | Asn | Phe | | |
| | 1010 | | | | | 1015 | | | | | 1020 | | | | | |
| aat | cca | aaa | ata | aat | atc | ata | gaa | gaa | act | gaa | tct | gat | atg | gta | | 3114 |
| Asn | Pro | Lys | Ile | Asn | Ile | Ile | Glu | Glu | Thr | Glu | Ser | Asp | Met | Val | | |
| | 1025 | | | | | 1030 | | | | | 1035 | | | | | |
| ata | agt | gta | agt | ata | aaa | aaa | tac | tat | att | aat | gac | aaa | ata | tct | | 3159 |
| Ile | Ser | Val | Ser | Ile | Lys | Lys | Tyr | Tyr | Ile | Asn | Asp | Lys | Ile | Ser | | |
| | 1040 | | | | | 1045 | | | | | 1050 | | | | | |
| tta | tat | cat | tac | tta | caa | atg | tat | ata | gaa | tat | tta | gaa | aat | aat | | 3204 |
| Leu | Tyr | His | Tyr | Leu | Gln | Met | Tyr | Ile | Glu | Tyr | Leu | Glu | Asn | Asn | | |
| | 1055 | | | | | 1060 | | | | | 1065 | | | | | |
| aaa | att | att | aaa | ggc | tat | tgg | ata | act | atg | aaa | tta | aaa | gat | aat | | 3249 |
| Lys | Ile | Ile | Lys | Gly | Tyr | Trp | Ile | Thr | Met | Lys | Leu | Lys | Asp | Asn | | |
| | 1070 | | | | | 1075 | | | | | 1080 | | | | | |
| gat | ata | aca | gtg | ata | ttt | gga | gtt | aaa | att | aaa | act | cct | tat | aat | | 3294 |
| Asp | Ile | Thr | Val | Ile | Phe | Gly | Val | Lys | Ile | Lys | Thr | Pro | Tyr | Asn | | |
| | 1085 | | | | | 1090 | | | | | 1095 | | | | | |
| ata | aat | aaa | ata | tat | atg | ata | aaa | agt | ata | cca | gtt | tcg | gtt | tct | | 3339 |
| Ile | Asn | Lys | Ile | Tyr | Met | Ile | Lys | Ser | Ile | Pro | Val | Ser | Val | Ser | | |
| | 1100 | | | | | 1105 | | | | | 1110 | | | | | |
| aaa | ggt | aaa | ata | agt | aac | ata | aat | tta | gag | ata | gaa | gat | gtt | aaa | | 3384 |
| Lys | Gly | Lys | Ile | Ser | Asn | Ile | Asn | Leu | Glu | Ile | Glu | Asp | Val | Lys | | |

| 1115 | 1120 | 1125 | |
|---|------|------|------|
| atg tat aat aat aat ttg gaa gaa caa aat ggt tat aga tta aaa | | | 3429 |
| Met Tyr Asn Asn Asn Leu Glu Glu Gln Asn Gly Tyr Arg Leu Lys | | | |
| 1130 | 1135 | 1140 | |
| ttc tat att gat agt gtc aca gat ttt att aat ttt gat acg aga | | | 3474 |
| Phe Tyr Ile Asp Ser Val Thr Asp Phe Ile Asn Phe Asp Thr Arg | | | |
| 1145 | 1150 | 1155 | |
| gat gtt tat ctg gaa tta ggt ccg tgg ttt acg tat aat tcg ttt | | | 3519 |
| Asp Val Tyr Leu Glu Leu Gly Pro Trp Phe Thr Tyr Asn Ser Phe | | | |
| 1160 | 1165 | 1170 | |
| ggc ata caa ttt gct gaa tat tct att aga cgt aga tta gtt tcg | | | 3564 |
| Gly Ile Gln Phe Ala Glu Tyr Ser Ile Arg Arg Arg Leu Val Ser | | | |
| 1175 | 1180 | 1185 | |
| tct aca aaa gaa aaa agt atg gaa ata tgt tat ata ata tta tcg | | | 3609 |
| Ser Thr Lys Glu Lys Ser Met Glu Ile Cys Tyr Ile Ile Leu Ser | | | |
| 1190 | 1195 | 1200 | |
| aaa ttg atg tgt tta tct tcc gaa atg tat aat ata aaa aga ata | | | 3654 |
| Lys Leu Met Cys Leu Ser Ser Glu Met Tyr Asn Ile Lys Arg Ile | | | |
| 1205 | 1210 | 1215 | |
| aga gag ggt aaa caa aat gtt ata aaa tca gca ata cat ggt agt | | | 3699 |
| Arg Glu Gly Lys Gln Asn Val Ile Lys Ser Ala Ile His Gly Ser | | | |
| 1220 | 1225 | 1230 | |
| tcg gat gct ata aca aca gct gca tat aat aat ata ata gat cca | | | 3744 |
| Ser Asp Ala Ile Thr Thr Ala Ala Tyr Asn Asn Ile Ile Asp Pro | | | |
| 1235 | 1240 | 1245 | |
| aac aat gat ata tat tct caa ata tta tca agt caa att atg aaa | | | 3789 |
| Asn Asn Asp Ile Tyr Ser Gln Ile Leu Ser Ser Gln Ile Met Lys | | | |
| 1250 | 1255 | 1260 | |
| tta gga cat gga tat tat gat tgt tat tta aat tta aat aga tat | | | 3834 |
| Leu Gly His Gly Tyr Tyr Asp Cys Tyr Leu Asn Leu Asn Arg Tyr | | | |
| 1265 | 1270 | 1275 | |
| gat tct att aac ata aat tct gtc acc gaa caa gat ata aat ata | | | 3879 |
| Asp Ser Ile Asn Ile Asn Ser Val Thr Glu Gln Asp Ile Asn Ile | | | |
| 1280 | 1285 | 1290 | |
| aca agt gaa ata att gaa aat ttc taa | | | 3906 |
| Thr Ser Glu Ile Ile Glu Asn Phe | | | |
| 1295 | 1300 | | |

<210> 61

<211> 483

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (483)

<223>

<400> 61

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|---|-----|
| atg gaa aga agt tta caa att ata aat aat aca aca tct aca tta tct | 48 |
| Met Glu Arg Ser Leu Gln Ile Ile Asn Asn Thr Thr Ser Thr Leu Ser | |
| 1 5 10 15 | |
| aga ata aca tca cca atc gat aat att aga tat att ttt gat ctt att | 96 |
| Arg Ile Thr Ser Pro Ile Asp Asn Ile Arg Tyr Ile Phe Asp Leu Ile | |
| 20 25 30 | |
| aac aca agt ggt aat ggt gaa att acg gca gaa gaa tta cta aat ttt | 144 |
| Asn Thr Ser Gly Asn Gly Glu Ile Thr Ala Glu Glu Leu Leu Asn Phe | |
| 35 40 45 | |
| tta att gtt att gat cca act ata aat tta tct gat gtt cgt gcg tta | 192 |
| Leu Ile Val Ile Asp Pro Thr Ile Asn Leu Ser Asp Val Arg Ala Leu | |
| 50 55 60 | |
| att gcc aca tat gat ttg aat aat aac aat acg tta agt ttt gat gaa | 240 |
| Ile Ala Thr Tyr Asp Leu Asn Asn Asn Asn Thr Leu Ser Phe Asp Glu | |
| 65 70 75 80 | |
| ttt gtt cca ata ata ggt att aat ata act gat gaa aaa tta aga gaa | 288 |
| Phe Val Pro Ile Ile Gly Ile Asn Ile Thr Asp Glu Lys Leu Arg Glu | |
| 85 90 95 | |
| gca ttt gat tct ata aca act gat ggt gat gtc gat ctt gat aaa ttt | 336 |
| Ala Phe Asp Ser Ile Thr Thr Asp Gly Asp Val Asp Leu Asp Lys Phe | |
| 100 105 110 | |
| aga aca tat tat aat tta tta caa att act ccc ata tat aga cat act | 384 |
| Arg Thr Tyr Tyr Asn Leu Leu Gln Ile Thr Pro Ile Tyr Arg His Thr | |
| 115 120 125 | |
| aac gat caa tat ata gat ata ata att aga atg atc gga agt agt caa | 432 |
| Asn Asp Gln Tyr Ile Asp Ile Ile Ile Arg Met Ile Gly Ser Ser Gln | |
| 130 135 140 | |
| gaa gaa ttt ata gca ttt tgg aat tac ata aat act caa gta aat gga | 480 |
| Glu Glu Phe Ile Ala Phe Trp Asn Tyr Ile Asn Thr Gln Val Asn Gly | |
| 145 150 155 160 | |
| taa | 483 |

<210> 62

<211> 540

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (540)

<223>

<400> 62

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|---|----|
| atg gac aat aat aca att act aaa cat att ggc tat aat act tta caa | 48 |
| Met Asp Asn Asn Thr Ile Thr Lys His Ile Gly Tyr Asn Thr Leu Gln | |
| 1 5 10 15 | |

| | |
|---|----|
| gtt gtt aca gaa att tct att caa tta gaa agc aaa caa ata aat aat | 96 |
| Val Val Thr Glu Ile Ser Ile Gln Leu Glu Ser Lys Gln Ile Asn Asn | |
| 20 25 30 | |

| | |
|---|-----|
| aat att aga caa gaa att gta tca aat ata aaa aat aat ata ata aat | 144 |
| Asn Ile Arg Gln Glu Ile Val Ser Asn Ile Lys Asn Asn Ile Ile Asn | |
| 35 40 45 | |

| | |
|---|-----|
| aaa act agc ggt gtt aat tat att tta tca gtt gat tat caa tca ata | 192 |
| Lys Thr Ser Gly Val Asn Tyr Ile Leu Ser Val Asp Tyr Gln Ser Ile | |
| 50 55 60 | |

| | |
|---|-----|
| tta aat aat gaa tta cca tta tta aga tta aat aat gta tat aca caa | 240 |
| Leu Asn Asn Glu Leu Pro Leu Leu Arg Leu Asn Asn Val Tyr Thr Gln | |
| 65 70 75 80 | |

| | |
|---|-----|
| gaa tta gtt gtt aaa tta ccc gta aca tat cta tat ttt aca aaa aat | 288 |
| Glu Leu Val Val Lys Leu Pro Val Thr Tyr Leu Tyr Phe Thr Lys Asn | |
| 85 90 95 | |

| | |
|---|-----|
| caa ata ata aaa gct tat ttg aca att att gaa gga gat aat cca cat | 336 |
| Gln Ile Ile Lys Ala Tyr Leu Thr Ile Ile Glu Gly Asp Asn Pro His | |
| 100 105 110 | |

| | |
|---|-----|
| gta gtt gca tat aac aaa tat ata tat tgt aat ata att tta gat cat | 384 |
| Val Val Ala Tyr Asn Lys Tyr Ile Tyr Cys Asn Ile Ile Leu Asp His | |
| 115 120 125 | |

| | |
|---|-----|
| aat ttc act ata aat atg tca gaa aaa tta tta ata ttt aag aac aaa | 432 |
| Asn Phe Thr Ile Asn Met Ser Glu Lys Leu Leu Ile Phe Lys Asn Lys | |
| 130 135 140 | |

gaa tat aaa aat aga gat gaa tgt tat gta aaa ata atc gat ata tat 480
 Glu Tyr Lys Asn Arg Asp Glu Cys Tyr Val Lys Ile Ile Asp Ile Tyr
 145 150 155 160

agt tca gaa aaa aat aat aaa ata cca tgc aaa ggt att ttg caa gac 528
 Ser Ser Glu Lys Asn Asn Lys Ile Pro Cys Lys Gly Ile Leu Gln Asp
 165 170 175

gaa gaa ata taa 540
 Glu Glu Ile

<210> 63

<211> 735

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (735)

<223>

<400> 63 48
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 1 5 10 15

tgg tta gat gtg ata gat aaa aaa caa tta gaa tat gct cat cat aaa 96
 Trp Leu Asp Val Ile Asp Lys Lys Gln Leu Glu Tyr Ala His His Lys
 20 25 30

tta aaa aat gaa tct att att aaa cca tct ata aat aat ata ttt aaa 144
 Leu Lys Asn Glu Ser Ile Ile Lys Pro Ser Ile Asn Asn Ile Phe Lys
 35 40 45

tgt ttt aaa tat ttt aat ccc gat caa gtt aaa gta att att tta ggt 192
 Cys Phe Lys Tyr Phe Asn Pro Asp Gln Val Lys Val Ile Ile Leu Gly
 50 55 60

cag gat cct tat cct act gtt gga atg gct gat ggt tta gca ttt tcc 240
 Gln Asp Pro Tyr Pro Thr Val Gly Met Ala Asp Gly Leu Ala Phe Ser
 65 70 75 80

tgt tct aat aat agt aat tat att cct aaa tct tta caa aac ata ata 288
 Cys Ser Asn Asn Ser Asn Tyr Ile Pro Lys Ser Leu Gln Asn Ile Ile

| 85 | 90 | 95 | |
|---|-----|-----|-----|
| aaa gaa ata tta aaa caa aat aaa aaa tat gat atg atg aaa aat att | | | 336 |
| Lys Glu Ile Leu Lys Gln Asn Lys Lys Tyr Asp Met Met Lys Asn Ile | | | |
| 100 | 105 | 110 | |
| aat atg aat tat att aat gta aat cta gaa ttt tta gcg aaa caa caa | | | 384 |
| Asn Met Asn Tyr Ile Asn Val Asn Leu Glu Phe Leu Ala Lys Gln Gln | | | |
| 115 | 120 | 125 | |
| att tta tta ttt aat acg ata ttg aca gtt ggt gat gag cca atg tca | | | 432 |
| Ile Leu Leu Phe Asn Thr Ile Leu Thr Val Gly Asp Glu Pro Met Ser | | | |
| 130 | 135 | 140 | |
| cac aaa cat att tgg gaa tca ttt tca aat tct att att aaa aaa tta | | | 480 |
| His Lys His Ile Trp Glu Ser Phe Ser Asn Ser Ile Ile Lys Lys Leu | | | |
| 145 | 150 | 155 | 160 |
| tca tta att aat aat aat ata gta ttt ata tta ttt ggt gca aaa gct | | | 528 |
| Ser Leu Ile Asn Asn Asn Ile Val Phe Ile Leu Phe Gly Ala Lys Ala | | | |
| 165 | 170 | 175 | |
| cat aat aaa att tat ttt atc gaa aat aaa aaa aat cat tgt att atc | | | 576 |
| His Asn Lys Ile Tyr Phe Ile Glu Asn Lys Lys Asn His Cys Ile Ile | | | |
| 180 | 185 | 190 | |
| aaa aca agt cat cct tct aat tta tct tgt tat aaa gat gga tat gat | | | 624 |
| Lys Thr Ser His Pro Ser Asn Leu Ser Cys Tyr Lys Asp Gly Tyr Asp | | | |
| 195 | 200 | 205 | |
| aaa tat gtt cct ttt aat aat tca gat tgt ttt aat att tgt aac gaa | | | 672 |
| Lys Tyr Val Pro Phe Asn Asn Ser Asp Cys Phe Asn Ile Cys Asn Glu | | | |
| 210 | 215 | 220 | |
| tat ctt ata aaa aat aat ata aaa ccg ata gat tgg tta tct gaa tta | | | 720 |
| Tyr Leu Ile Lys Asn Asn Ile Lys Pro Ile Asp Trp Leu Ser Glu Leu | | | |
| 225 | 230 | 235 | 240 |
| ata aaa aat aat taa | | | 735 |
| Ile Lys Asn Asn | | | |

<210> 64

<211> 714

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (714)

<223>

<400> 64

| | |
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| atg gaa aat tat gat ttt aaa att gat aaa tat act cat ata gga aat | 48 |
| Met Glu Asn Tyr Asp Phe Lys Ile Asp Lys Tyr Thr His Ile Gly Asn | |
| 1 5 10 15 | |
| cgt agt tat aac gat gat tat ata ttt ata aaa aaa aat ata aat tat | 96 |
| Arg Ser Tyr Asn Asp Asp Tyr Ile Phe Ile Lys Lys Asn Ile Asn Tyr | |
| 20 25 30 | |
| atc atg ttt gta ata att gac gga cac gga ggt tca gaa tgt tct aaa | 144 |
| Ile Met Phe Val Ile Ile Asp Gly His Gly Gly Ser Glu Cys Ser Lys | |
| 35 40 45 | |
| ata ttt ata aaa tta ttt aat aaa aat ttt aat cca aaa cca tat gta | 192 |
| Ile Phe Ile Lys Leu Phe Asn Lys Asn Phe Asn Pro Lys Pro Tyr Val | |
| 50 55 60 | |
| gat att gga tta tat ata aaa aat tta ttt ata aaa att aat aaa aca | 240 |
| Asp Ile Gly Leu Tyr Ile Lys Asn Leu Phe Ile Lys Ile Asn Lys Thr | |
| 65 70 75 80 | |
| att tta aat aat aaa att aca tct gga gca tgt gta tct ggt att tat | 288 |
| Ile Leu Asn Asn Lys Ile Thr Ser Gly Ala Cys Val Ser Gly Ile Tyr | |
| 85 90 95 | |
| att gat aat aat aaa aca ata ata ttt caa tta gga gat aca aaa ata | 336 |
| Ile Asp Asn Asn Lys Thr Ile Ile Phe Gln Leu Gly Asp Thr Lys Ile | |
| 100 105 110 | |
| tat tta tat aat aac aat aaa tta aca tat gaa aca ata caa cat gat | 384 |
| Tyr Leu Tyr Asn Asn Asn Lys Leu Thr Tyr Glu Thr Ile Gln His Asp | |
| 115 120 125 | |
| ata tca aat aaa tac gaa aga aat aaa ttt ttt aaa gat ttt att tat | 432 |
| Ile Ser Asn Lys Tyr Glu Arg Asn Lys Phe Phe Lys Asp Phe Ile Tyr | |
| 130 135 140 | |
| tca gat att cca aga tta ttt gga aag tta aca gtt aca agg gca ata | 480 |
| Ser Asp Ile Pro Arg Leu Phe Gly Lys Leu Thr Val Thr Arg Ala Ile | |
| 145 150 155 160 | |
| gga aat ttt gat tta aat ata aaa tat ata cct aaa ata gat tat att | 528 |
| Gly Asn Phe Asp Leu Asn Ile Lys Tyr Ile Pro Lys Ile Asp Tyr Ile | |
| 165 170 175 | |
| tct aat aat agt tat aat aaa att att tta tgc aca gat gga gtg tat | 576 |
| Ser Asn Asn Ser Tyr Asn Lys Ile Ile Leu Cys Thr Asp Gly Val Tyr | |
| 180 185 190 | |
| aaa aaa ata aat ata aat atc gat gat act gct aaa gaa aat att aat | 624 |
| Lys Lys Ile Asn Ile Asn Ile Asp Asp Thr Ala Lys Glu Asn Ile Asn | |

| 195 | 200 | 205 | |
|---|-----|-----|-----|
| aaa tgt tta aaa aat cct cct aat gat aat atg act atg atg att ata | | | 672 |
| Lys Cys Leu Lys Asn Pro Pro Asn Asp Asn Met Thr Met Met Ile Ile | | | |
| 210 | 215 | 220 | |
| aat tta tca aat ata tta cat tta ata aat aaa aac ata taa | | | 714 |
| Asn Leu Ser Asn Ile Leu His Leu Ile Asn Lys Asn Ile | | | |
| 225 | 230 | 235 | |
| <210> 65 | | | |
| <211> 474 | | | |
| <212> DNA | | | |
| <213> Amsacta moorei entomopoxvirus | | | |
| <220> | | | |
| <221> exon | | | |
| <222> (1) .. (474) | | | |
| <223> | | | |
| <400> 65 | | | |
| atg tta cct tat aaa tgg aat aat tat ttt gca cac gga act ata ata | | | 48 |
| Met Leu Pro Tyr Lys Trp Asn Asn Tyr Phe Ala His Gly Thr Ile Ile | | | |
| 1 | 5 | 10 | 15 |
| aag tgt ata aat aca ata tgt ttc aaa ctt ccg tgc aat ggt act gaa | | | 96 |
| Lys Cys Ile Asn Thr Ile Cys Phe Lys Leu Pro Cys Asn Gly Thr Glu | | | |
| 20 | 25 | 30 | |
| tgg gat ata tgt aaa tta ata aat act ttt cct aat tta aaa att gta | | | 144 |
| Trp Asp Ile Cys Lys Leu Ile Asn Thr Phe Pro Asn Leu Lys Ile Val | | | |
| 35 | 40 | 45 | |
| ata gat ttt aga tat tca gaa aca tgt tat aat cca tct gat ctt aat | | | 192 |
| Ile Asp Phe Arg Tyr Ser Glu Thr Cys Tyr Asn Pro Ser Asp Leu Asn | | | |
| 50 | 55 | 60 | |
| aaa tta ggt ata gaa tat ata aaa ata cca ata aaa gca caa tct tta | | | 240 |
| Lys Leu Gly Ile Glu Tyr Ile Lys Ile Pro Ile Lys Ala Gln Ser Leu | | | |
| 65 | 70 | 75 | 80 |
| cca aca gat gat aaa ata aat aaa ttt ttt aat att att gat aaa tat | | | 288 |
| Pro Thr Asp Asp Lys Ile Asn Lys Phe Phe Asn Ile Ile Asp Lys Tyr | | | |
| 85 | 90 | 95 | |
| att gaa tta aaa tat tta ata gga ata cat tgt act cat ggc att aat | | | 336 |

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Ile | Glu | Leu | Lys | Tyr | Leu | Ile | Gly | Ile | His | Cys | Thr | His | Gly | Ile | Asn | | |
| | | | 100 | | | | | 105 | | | | | 110 | | | | |
| aga | act | gga | tat | atg | gtt | tgt | aaa | tac | tta | ata | tat | aaa | ttt | aaa | att | 384 | |
| Arg | Thr | Gly | Tyr | Met | Val | Cys | Lys | Tyr | Leu | Ile | Tyr | Lys | Phe | Lys | Ile | | |
| | | 115 | | | | | 120 | | | | | 125 | | | | | |
| cca | cct | tat | gtt | gct | ata | aat | att | ttc | gaa | aaa | aat | aga | gga | tat | tat | 432 | |
| Pro | Pro | Tyr | Val | Ala | Ile | Asn | Ile | Phe | Glu | Lys | Asn | Arg | Gly | Tyr | Tyr | | |
| | | 130 | | | | 135 | | | | | 140 | | | | | | |
| ata | gaa | aga | gaa | ata | tat | ata | aat | aat | tta | tta | tat | ttt | taa | | | 474 | |
| Ile | Glu | Arg | Glu | Ile | Tyr | Ile | Asn | Asn | Leu | Leu | Tyr | Phe | | | | | |
| 145 | | | | | 150 | | | | 155 | | | | | | | | |

<210> 66

<211> 870

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (870)

<223>

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|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| <400> | 66 | | | | | | | | | | | | | | | | |
| atg | gaa | aat | tat | cat | att | att | ata | tta | aca | att | aaa | aga | aat | tct | gac | 48 | |
| Met | Glu | Asn | Tyr | His | Ile | Ile | Ile | Leu | Thr | Ile | Lys | Arg | Asn | Ser | Asp | | |
| 1 | | | | 5 | | | | 10 | | | | | 15 | | | | |
| aga | tta | caa | aaa | cta | gaa | aat | ata | tta | tct | tgt | caa | aat | tta | tta | tat | 96 | |
| Arg | Leu | Gln | Lys | Leu | Glu | Asn | Ile | Leu | Ser | Cys | Gln | Asn | Leu | Leu | Tyr | | |
| | | | 20 | | | | | 25 | | | | | 30 | | | | |
| aat | aaa | gat | tat | agt | gta | ttt | tat | gga | ata | gat | tat | aaa | aat | ata | aat | 144 | |
| Asn | Lys | Asp | Tyr | Ser | Val | Phe | Tyr | Gly | Ile | Asp | Tyr | Lys | Asn | Ile | Asn | | |
| | | 35 | | | | 40 | | | | | | 45 | | | | | |
| aaa | aat | aat | tta | aaa | aat | ata | tgt | aaa | aaa | gga | ttt | aaa | aac | aca | tgt | 192 | |
| Lys | Asn | Asn | Leu | Lys | Asn | Ile | Cys | Lys | Lys | Gly | Phe | Lys | Asn | Thr | Cys | | |
| | | 50 | | | | 55 | | | | 60 | | | | | | | |
| cct | tat | tca | act | tta | gca | tgt | gcg | tca | tca | cat | att | cta | tta | tg | aaa | 240 | |
| Pro | Tyr | Ser | Thr | Leu | Ala | Cys | Ala | Ser | Ser | His | Ile | Leu | Leu | Trp | Lys | | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | | |

| | |
|---|-----|
| tat ata tca aaa tta aaa gat aaa tat aaa tat att ata ata tta gaa | 288 |
| Tyr Ile Ser Lys Leu Lys Asp Lys Tyr Lys Tyr Ile Ile Ile Leu Glu | |
| 85 90 95 | |
| gat gat aca tat ata aat gta tca gag tat aat aaa cat aca aat aca | 336 |
| Asp Asp Thr Tyr Ile Asn Val Ser Glu Tyr Asn Lys His Thr Asn Thr | |
| 100 105 110 | |
| gtt gaa gaa tta tta aaa aat aat agt ata gta ttt tta tat tct gat | 384 |
| Val Glu Glu Leu Leu Lys Asn Asn Ser Ile Val Phe Leu Tyr Ser Asp | |
| 115 120 125 | |
| tgt tat ata atg gga act acc atc aaa tca acc aac aat gat aca aaa | 432 |
| Cys Tyr Ile Met Gly Thr Thr Ile Lys Ser Thr Asn Asn Asp Thr Lys | |
| 130 135 140 | |
| ata aca tat aat cca aag ttt cac gtt tct atg ggt tgt tat tgt ata | 480 |
| Ile Thr Tyr Asn Pro Lys Phe His Val Ser Met Gly Cys Tyr Cys Ile | |
| 145 150 155 160 | |
| aca cca atc act gct act aaa tta tat tat ttc tat ata aaa tct aga | 528 |
| Thr Pro Ile Thr Ala Thr Lys Leu Tyr Tyr Phe Tyr Ile Lys Ser Arg | |
| 165 170 175 | |
| gta tgg ttc cac ata gat ttt caa tta aat ttt gat ata cat aat ata | 576 |
| Val Trp Phe His Ile Asp Phe Gln Leu Asn Phe Asp Ile His Asn Ile | |
| 180 185 190 | |
| tca tta aat aga tat att tat ata gct gct aat gta tgt aat caa tat | 624 |
| Ser Leu Asn Arg Tyr Ile Tyr Ile Ala Ala Asn Val Cys Asn Gln Tyr | |
| 195 200 205 | |
| gaa gga aat aaa tca tct atg ggt tta aaa cat aat aat ata atg tta | 672 |
| Glu Gly Asn Lys Ser Ser Met Gly Leu Lys His Asn Asn Ile Met Leu | |
| 210 215 220 | |
| ata cct ata gaa aat aca aaa tta atg aga ata ata tct act cct att | 720 |
| Ile Pro Ile Glu Asn Thr Lys Leu Met Arg Ile Ile Ser Thr Pro Ile | |
| 225 230 235 240 | |
| ata aga gtt aat gaa gct gaa ata gat ttt tat ata ata ata atg tta | 768 |
| Ile Arg Val Asn Glu Ala Glu Ile Asp Phe Tyr Ile Ile Ile Met Leu | |
| 245 250 255 | |
| atc tca ctt atc gct agt tta tat ttc ttt ggt ttt aat att tct gcc | 816 |
| Ile Ser Leu Ile Ala Ser Leu Tyr Phe Phe Gly Phe Asn Ile Ser Ala | |
| 260 265 270 | |
| tta ata ttt tta tta ttt ata gta gta gat gtt gcg gag aat gca aaa | 864 |
| Leu Ile Phe Leu Leu Phe Ile Val Val Asp Val Ala Glu Asn Ala Lys | |
| 275 280 285 | |
| aaa taa | 870 |
| Lys | |

<210> 67

<211> 1830

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (1830)

<223>

<400> 67

| | |
|---|-----|
| atg aat ata aaa tta tta aaa aat gga atg cga att att aat aat aat | 48 |
| Met Asn Ile Lys Leu Leu Lys Asn Gly Met Arg Ile Ile Asn Asn Asn | |
| 1 5 10 15 | |
| ttt gat aat aat aat tta ata aat ata tct ata aat aat ttt ggt caa | 96 |
| Phe Asp Asn Asn Asn Leu Ile Asn Ile Ser Ile Asn Asn Phe Gly Gln | |
| 20 25 30 | |
| aat tta tca ata tat tat aag aat tat aag tta ata cat ctc ata gaa | 144 |
| Asn Leu Ser Ile Tyr Tyr Lys Asn Tyr Lys Leu Ile His Leu Ile Glu | |
| 35 40 45 | |
| cat ata tta gta tca atg cta ata gta tat aca ggt gaa tta tca ttt | 192 |
| His Ile Leu Val Ser Met Leu Ile Val Tyr Thr Gly Glu Leu Ser Phe | |
| 50 55 60 | |
| tgg aac gga tat aca aat tca aat aat att aat ata tat tat aat aat | 240 |
| Trp Asn Gly Tyr Thr Asn Ser Asn Asn Ile Asn Ile Tyr Tyr Asn Asn | |
| 65 70 75 80 | |
| ata atg aat ata tca cat aat aaa ata att gat gcg ata ctt cgt tta | 288 |
| Ile Met Asn Ile Ser His Asn Lys Ile Ile Asp Ala Ile Leu Arg Leu | |
| 85 90 95 | |
| ttt aat aaa aat ggt att ttt gtt gat gaa aat ata ata aat tat aaa | 336 |
| Phe Asn Lys Asn Gly Ile Phe Val Asp Glu Asn Ile Ile Asn Tyr Lys | |
| 100 105 110 | |
| ttt tta gaa aat gaa aat aaa ata tta aat aat gaa aaa aat ttt aga | 384 |
| Phe Leu Glu Asn Glu Asn Lys Ile Leu Asn Asn Glu Lys Asn Phe Arg | |
| 115 120 125 | |
| tta tta aca gat aaa tat gaa ata aat cct ata tta tat ctt tta aca | 432 |
| Leu Leu Thr Asp Lys Tyr Glu Ile Asn Pro Ile Leu Tyr Leu Leu Thr | |
| 130 135 140 | |

| | |
|---|------|
| aat gat gtt tat tta gaa gaa aat aat caa aaa ata ata tct gat gtt | 480 |
| Asn Asp Val Tyr Leu Glu Glu Asn Asn Gln Lys Ile Ile Ser Asp Val | |
| 145 150 155 160 | |
| aaa ttt att aat gat gta ttg tcg gat att aat gtg tca gat att ata | 528 |
| Lys Phe Ile Asn Asp Val Leu Ser Asp Ile Asn Val Ser Asp Ile Ile | |
| 165 170 175 | |
| ttt tat act tca aat aca gat ttt ttt aat ata tta tat ccg cga tta | 576 |
| Phe Tyr Thr Ser Asn Thr Asp Phe Phe Asn Ile Leu Tyr Pro Arg Leu | |
| 180 185 190 | |
| gat aaa ata att ttt aat aaa act aaa aat aaa aaa aat aaa ttt cta | 624 |
| Asp Lys Ile Ile Phe Asn Lys Thr Lys Asn Lys Lys Asn Lys Phe Leu | |
| 195 200 205 | |
| aca tta ccc att tat aaa tct agt ttt aaa aat agt ata tat tta ttt | 672 |
| Thr Leu Pro Ile Tyr Lys Ser Ser Phe Lys Asn Ser Ile Tyr Leu Phe | |
| 210 215 220 | |
| tct ttc gat caa aat aat aga tat tat agt ata act att aaa ttt aat | 720 |
| Ser Phe Asp Gln Asn Asn Arg Tyr Tyr Ser Ile Thr Ile Lys Phe Asn | |
| 225 230 235 240 | |
| tta tta aaa tat gtt ata att gga tat atg att gat aaa tat tat tat | 768 |
| Leu Leu Lys Tyr Val Ile Ile Gly Tyr Met Ile Asp Lys Tyr Tyr Tyr | |
| 245 250 255 | |
| aat aaa tta gta tta atc aat ata tta tcc gat aaa tta tta tct tta | 816 |
| Asn Lys Leu Val Leu Ile Asn Ile Leu Ser Asp Lys Leu Leu Ser Leu | |
| 260 265 270 | |
| act ata tat ttt tta aca agt gaa tat atg tat aaa tca tta aat tat | 864 |
| Thr Ile Tyr Phe Leu Thr Ser Glu Tyr Met Tyr Lys Ser Leu Asn Tyr | |
| 275 280 285 | |
| ttt gaa act ata gat tat tct aaa ata aaa aaa tta gaa ttt gat gat | 912 |
| Phe Glu Thr Ile Asp Tyr Ser Lys Ile Lys Lys Leu Glu Phe Asp Asp | |
| 290 295 300 | |
| tat gta ata tta aat gaa tat ttt gat att ata aat att tat aat aat | 960 |
| Tyr Val Ile Leu Asn Glu Tyr Phe Asp Ile Ile Asn Ile Tyr Asn Asn | |
| 305 310 315 320 | |
| ata aaa agt aat aat ata aat aaa tat tat tct tat tat aat aaa tat | 1008 |
| Ile Lys Ser Asn Asn Ile Asn Lys Tyr Tyr Ser Tyr Tyr Asn Lys Tyr | |
| 325 330 335 | |
| att gat tat att ata aat tca tct aca gat ata aat aaa ttt ttt tta | 1056 |
| Ile Asp Tyr Ile Ile Asn Ser Ser Thr Asp Ile Asn Lys Phe Phe Leu | |
| 340 345 350 | |
| caa ata cct aat caa cta tat tta aat aat gaa ttt gat att aat aat | 1104 |
| Gln Ile Pro Asn Gln Leu Tyr Leu Asn Asn Glu Phe Asp Ile Asn Asn | |
| 355 360 365 | |
| att cct gtt ttt aaa gca gaa aca tta ttt aat agt aaa ata aac aca | 1152 |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Ile | Pro | Val | Phe | Lys | Ala | Glu | Thr | Leu | Phe | Asn | Ser | Lys | Ile | Asn | Thr | |
| 370 | | | | | | 375 | | | | 380 | | | | | | |
| aat | aat | aaa | aat | aaa | ata | aca | aat | att | aat | aat | ata | gaa | ata | tta | aat | 1200 |
| Asn | Asn | Lys | Asn | Lys | Ile | Thr | Asn | Ile | Asn | Asn | Ile | Glu | Ile | Leu | Asn | |
| 385 | | | | | 390 | | | | 395 | | | | | | 400 | |
| ttt | aat | ggt | aat | aat | atg | ata | ttt | ttt | atg | aat | ggt | att | gaa | gat | aaa | 1248 |
| Phe | Asn | Val | Asn | Asn | Met | Ile | Phe | Phe | Met | Asn | Val | Ile | Glu | Asp | Lys | |
| | | | | 405 | | | | | 410 | | | | | 415 | | |
| ttt | gaa | ata | aaa | aat | aat | gaa | ata | att | ata | aaa | aat | aca | aaa | aat | ata | 1296 |
| Phe | Glu | Ile | Lys | Asn | Asn | Glu | Ile | Ile | Ile | Lys | Asn | Thr | Lys | Asn | Ile | |
| | | | 420 | | | | | 425 | | | | | | 430 | | |
| tat | aaa | tca | gat | aat | aat | ata | tgt | gtg | ctt | aat | aat | aat | tat | aat | tat | 1344 |
| Tyr | Lys | Ser | Asp | Asn | Asn | Ile | Cys | Val | Leu | Asn | Asn | Asn | Tyr | Asn | Tyr | |
| | | 435 | | | | | 440 | | | | | 445 | | | | |
| cct | aaa | ata | tat | ttt | tat | tat | aaa | tat | ttt | ata | att | tac | ttt | ttt | tct | 1392 |
| Pro | Lys | Ile | Tyr | Phe | Tyr | Tyr | Lys | Tyr | Phe | Ile | Ile | Tyr | Phe | Phe | Ser | |
| | 450 | | | | | 455 | | | | | 460 | | | | | |
| aat | ata | ttt | tta | aat | att | gac | gat | gct | ata | gaa | tat | gta | aaa | tat | aaa | 1440 |
| Asn | Ile | Phe | Leu | Asn | Ile | Asp | Asp | Ala | Ile | Glu | Tyr | Val | Lys | Tyr | Lys | |
| 465 | | | | | 470 | | | | 475 | | | | | | 480 | |
| cct | tat | ttt | aat | tta | tta | aat | aat | att | aat | gta | gaa | aat | aat | ttt | aac | 1488 |
| Pro | Tyr | Phe | Asn | Leu | Leu | Asn | Asn | Ile | Asn | Val | Glu | Asn | Asn | Phe | Asn | |
| | | | | 485 | | | | | 490 | | | | | 495 | | |
| aca | aat | ata | tta | ata | aat | aat | aaa | aaa | ata | aac | ata | aat | aca | aat | cat | 1536 |
| Thr | Asn | Ile | Leu | Ile | Asn | Asn | Lys | Lys | Ile | Asn | Ile | Asn | Thr | Asn | His | |
| | | | 500 | | | | | 505 | | | | | 510 | | | |
| gat | ttc | ata | aca | gca | tta | tac | ata | tat | aat | tgt | aat | aat | aaa | aat | tgt | 1584 |
| Asp | Phe | Ile | Thr | Ala | Leu | Tyr | Ile | Tyr | Asn | Cys | Asn | Asn | Lys | Asn | Cys | |
| | | 515 | | | | | 520 | | | | | 525 | | | | |
| tat | ata | cat | atg | gct | act | att | tca | gat | ata | tta | aga | gat | ctc | gga | tta | 1632 |
| Tyr | Ile | His | Met | Ala | Thr | Ile | Ser | Asp | Ile | Leu | Arg | Asp | Leu | Gly | Leu | |
| | 530 | | | | | 535 | | | | | 540 | | | | | |
| ata | tac | acc | cct | att | att | aat | ttt | gaa | aat | aat | cta | ggt | tat | tta | ttt | 1680 |
| Ile | Tyr | Thr | Pro | Ile | Ile | Asn | Phe | Glu | Asn | Asn | Leu | Val | Tyr | Leu | Phe | |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 | |
| ata | ata | aca | aat | aaa | cca | cat | gaa | act | gaa | ata | cat | tta | aga | aaa | ata | 1728 |
| Ile | Ile | Thr | Asn | Lys | Pro | His | Glu | Thr | Glu | Ile | His | Leu | Arg | Lys | Ile | |
| | | | | 565 | | | | | 570 | | | | | 575 | | |
| tta | aat | gat | aaa | ttt | aat | gta | aat | aat | ggt | att | aca | ata | ata | tca | aca | 1776 |
| Leu | Asn | Asp | Lys | Phe | Asn | Val | Asn | Asn | Val | Ile | Thr | Ile | Ile | Ser | Thr | |
| | | | 580 | | | | | 585 | | | | | 590 | | | |
| aaa | gga | aac | tat | aac | act | aaa | gaa | tta | tta | aat | aaa | tac | ata | acc | ttc | 1824 |
| Lys | Gly | Asn | Tyr | Asn | Thr | Lys | Glu | Leu | Leu | Asn | Lys | Tyr | Ile | Thr | Phe | |

| 595 | 600 | 605 | |
|---|-----|-----|------|
| aat taa | | | 1830 |
| Asn | | | |
| | | | |
| <210> 68 | | | |
| <211> 741 | | | |
| <212> DNA | | | |
| <213> Amsacta moorei entomopoxvirus | | | |
| | | | |
| <220> | | | |
| <221> exon | | | |
| <222> (1) .. (741) | | | |
| <223> | | | |
| | | | |
| <400> 68 | | | |
| atg gga gcg tcc gca agt att aat act att gtg tct gat ata act aat | | | 48 |
| Met Gly Ala Ser Ala Ser Ile Asn Thr Ile Val Ser Asp Ile Thr Asn | | | |
| 1 5 10 15 | | | |
| | | | |
| aga gtt gaa aat tca tta att caa aca gca aat gcc tct gca caa gca | | | 96 |
| Arg Val Glu Asn Ser Leu Ile Gln Thr Ala Asn Ala Ser Ala Gln Ala | | | |
| 20 25 30 | | | |
| | | | |
| ata tgt cga gta aca att gga agt att agt ttt aga tcc aca cag gga | | | 144 |
| Ile Cys Arg Val Thr Ile Gly Ser Ile Ser Phe Arg Ser Thr Gln Gly | | | |
| 35 40 45 | | | |
| | | | |
| tgt act ata gag gta aga aat tta tgt agt gcg caa gct gta gca caa | | | 192 |
| Cys Thr Ile Glu Val Arg Asn Leu Cys Ser Ala Gln Ala Val Ala Gln | | | |
| 50 55 60 | | | |
| | | | |
| gtt gac gct gta gta aat gca act att gat ttt tat aat aat tta act | | | 240 |
| Val Asp Ala Val Val Asn Ala Thr Ile Asp Phe Tyr Asn Asn Leu Thr | | | |
| 65 70 75 80 | | | |
| | | | |
| ttt gaa caa aaa caa gaa gca cct acg tgg ttt aca gta gct tat gga | | | 288 |
| Phe Glu Gln Lys Gln Glu Ala Pro Thr Trp Phe Thr Val Ala Tyr Gly | | | |
| 85 90 95 | | | |
| | | | |
| ata aat act act gta act act atc gaa aat gat ttt aga aat tta gtt | | | 336 |
| Ile Asn Thr Thr Val Thr Thr Ile Glu Asn Asp Phe Arg Asn Leu Val | | | |
| 100 105 110 | | | |
| | | | |
| gaa caa aga tgt aaa tct caa gct gtt tta gat agt agc ata aca gtt | | | 384 |

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Glu | Gln | Arg | Cys | Lys | Ser | Gln | Ala | Val | Leu | Asp | Ser | Ser | Ile | Thr | Val | | |
| | | 115 | | | | | 120 | | | | | 125 | | | | | |
| gat | aat | att | tta | gtt | aat | gat | tgt | aga | gca | cca | gga | aat | gaa | ata | gtt | 432 | |
| Asp | Asn | Ile | Leu | Val | Asn | Asp | Cys | Arg | Ala | Pro | Gly | Asn | Glu | Ile | Val | | |
| | 130 | | | | | 135 | | | | | 140 | | | | | | |
| aga | ttt | aca | ttt | gtt | aat | tct | gga | acg | gct | gct | gga | caa | tgt | gca | ata | 480 | |
| Arg | Phe | Thr | Phe | Val | Asn | Ser | Gly | Thr | Ala | Ala | Gly | Gln | Cys | Ala | Ile | | |
| | 145 | | | | 150 | | | | 155 | | | | | 160 | | | |
| tct | gct | cta | tta | gat | tta | caa | gta | gcg | ggg | tct | aat | caa | gta | agt | gct | 528 | |
| Ser | Ala | Leu | Leu | Asp | Leu | Gln | Val | Ala | Gly | Ser | Asn | Gln | Val | Ser | Ala | | |
| | | | | 165 | | | | 170 | | | | | | 175 | | | |
| agt | caa | agt | caa | ggg | tta | aat | ata | gga | aat | ata | ata | tta | tat | gta | gca | 576 | |
| Ser | Gln | Ser | Gln | Gly | Leu | Asn | Ile | Gly | Asn | Ile | Ile | Leu | Tyr | Val | Ala | | |
| | | | 180 | | | | | 185 | | | | | 190 | | | | |
| ata | gca | att | att | gtt | att | gca | ata | tca | tat | gtt | tta | ata | aaa | ttt | ttt | 624 | |
| Ile | Ala | Ile | Ile | Val | Ile | Ala | Ile | Ser | Tyr | Val | Leu | Ile | Lys | Phe | Phe | | |
| | | 195 | | | | 200 | | | | | | 205 | | | | | |
| ggg | aat | aaa | cca | aca | ata | aaa | caa | caa | att | agt | tta | gaa | tta | gct | aaa | 672 | |
| Gly | Asn | Lys | Pro | Thr | Ile | Lys | Gln | Gln | Ile | Ser | Leu | Glu | Leu | Ala | Lys | | |
| | 210 | | | | | 215 | | | | 220 | | | | | | | |
| aat | gga | gca | gtg | tct | agt | caa | tta | ata | caa | tta | tcg | aga | tat | gta | tct | 720 | |
| Asn | Gly | Ala | Val | Ser | Ser | Gln | Leu | Ile | Gln | Leu | Ser | Arg | Tyr | Val | Ser | | |
| | 225 | | | | 230 | | | | 235 | | | | | 240 | | | |
| aaa | ata | gat | gat | aga | gat | tga | | | | | | | | | | 741 | |
| Lys | Ile | Asp | Asp | Arg | Asp | | | | | | | | | | | | |
| | | | | 245 | | | | | | | | | | | | | |

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<213> Amsacta moorei entomopoxvirus

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<400> 69

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| atg act tta gtt aaa cat aat acg atg cat aat ttt tta cat tca aaa | 48 |
| Met Thr Leu Val Lys His Asn Thr Met His Asn Phe Leu His Ser Lys | |
| 1 5 10 15 | |
| tca aat ata tct gaa tta gat tat agt att gaa tct tcg tca gaa aga | 96 |
| Ser Asn Ile Ser Glu Leu Asp Tyr Ser Ile Glu Ser Ser Ser Glu Arg | |
| 20 25 30 | |
| aga gat ata att ata aaa aaa tac gat aca tta aat ata aaa aat tat | 144 |
| Arg Asp Ile Ile Ile Lys Lys Tyr Asp Thr Leu Asn Ile Lys Asn Tyr | |
| 35 40 45 | |
| aat aga aaa aca agt ttt aat gct ata tta ata aca agc gat aat aaa | 192 |
| Asn Arg Lys Thr Ser Phe Asn Ala Ile Leu Ile Thr Ser Asp Asn Lys | |
| 50 55 60 | |
| att att att gca gaa aga aaa ttt agc tat tat atg gac aca ata tat | 240 |
| Ile Ile Ile Ala Glu Arg Lys Phe Ser Tyr Tyr Met Asp Thr Ile Tyr | |
| 65 70 75 80 | |
| ata ata tct aca tat aaa aat ata tct gat gat ata tta gaa aca ttt | 288 |
| Ile Ile Ser Thr Tyr Lys Asn Ile Ser Asp Asp Ile Leu Glu Thr Phe | |
| 85 90 95 | |
| att aaa tta ttt gat aaa tta act aat aaa gaa aaa tat aat ata tat | 336 |
| Ile Lys Leu Phe Asp Lys Leu Thr Asn Lys Glu Lys Tyr Asn Ile Tyr | |
| 100 105 110 | |
| aat aaa aaa aga ata aat aaa aaa tat att tca att ata aat ttt att | 384 |
| Asn Lys Lys Arg Ile Asn Lys Lys Tyr Ile Ser Ile Ile Asn Phe Ile | |
| 115 120 125 | |
| gaa gta tat ttc gat ggt aat ata aat cat aaa tat tta caa tat tta | 432 |
| Glu Val Tyr Phe Asp Gly Asn Ile Asn His Lys Tyr Leu Gln Tyr Leu | |
| 130 135 140 | |
| tat aat gta aaa tct aga att ata tta aat aat aat ttt aga tac aga | 480 |
| Tyr Asn Val Lys Ser Arg Ile Ile Leu Asn Asn Asn Phe Arg Tyr Arg | |
| 145 150 155 160 | |
| gat aaa ttt tta att tta cct ggt ggt aaa aaa aat aat aat gaa aat | 528 |
| Asp Lys Phe Leu Ile Leu Pro Gly Gly Lys Lys Asn Asn Asn Glu Asn | |
| 165 170 175 | |
| att aat gaa gtt ata agt cga gaa tca cac gaa gaa ata aat att cct | 576 |
| Ile Asn Glu Val Ile Ser Arg Glu Ser His Glu Glu Ile Asn Ile Pro | |
| 180 185 190 | |
| ata aat aat caa gat aat aat aat att gat ata atg caa gac tat tat | 624 |
| Ile Asn Asn Gln Asp Asn Asn Asn Ile Asp Ile Met Gln Asp Tyr Tyr | |
| 195 200 205 | |
| tca gaa act ata ata ttt gat aaa ata ctt tca aaa aaa ttt att gat | 672 |
| Ser Glu Thr Ile Ile Phe Asp Lys Ile Leu Ser Lys Lys Phe Ile Asp | |
| 210 215 220 | |
| gtt act att ata gca aaa atc aaa tat agt tct att caa ata tta aat | 720 |

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<210> 70
<211> 1002
<212> DNA
<213> Amsacta moorei entomopoxvirus
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<221> exon
<222> (1)..(1002)
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| | |
|---|-----|
| aaa aga aga aat gac aga ata aaa ata ttt tta aaa gta gaa aat aaa | 288 |
| Lys Arg Arg Asn Asp Arg Ile Lys Ile Phe Leu Lys Val Glu Asn Lys | |
| 85 90 95 | |
| ata cct aaa ata gaa aaa tat att aat aaa gaa ttg aat ata ttc aaa | 336 |
| Ile Pro Lys Ile Glu Lys Tyr Ile Asn Lys Glu Leu Asn Ile Phe Lys | |
| 100 105 110 | |
| aaa aat ggt agt aat tca tca cac ata tac ata act gat aaa atg att | 384 |
| Lys Asn Gly Ser Asn Ser Ser His Ile Tyr Ile Thr Asp Lys Met Ile | |
| 115 120 125 | |
| ttt gct att ata tta tta gta gaa atg tgt ttt ttt ata aga act gga | 432 |
| Phe Ala Ile Ile Leu Leu Val Glu Met Cys Phe Phe Ile Arg Thr Gly | |
| 130 135 140 | |
| aaa aaa aaa tat tta gaa gat aat gaa act atc gga tta ttg aca tta | 480 |
| Lys Lys Lys Tyr Leu Glu Asp Asn Glu Thr Ile Gly Leu Leu Thr Leu | |
| 145 150 155 160 | |
| caa aaa aat aat ttt aca ata gaa aat gat gtt ata tat ata aat ttt | 528 |
| Gln Lys Asn Asn Phe Thr Ile Glu Asn Asp Val Ile Tyr Ile Asn Phe | |
| 165 170 175 | |
| aaa gga aaa tta tct caa aat caa aat ttt agc ata tta aaa gat gag | 576 |
| Lys Gly Lys Leu Ser Gln Asn Gln Asn Phe Ser Ile Leu Lys Asp Glu | |
| 180 185 190 | |
| cat tta tta ata tac aat atg att aaa ata tta tat aat aag act aat | 624 |
| His Leu Leu Ile Tyr Asn Met Ile Lys Ile Leu Tyr Asn Lys Thr Asn | |
| 195 200 205 | |
| gat ttt ata ttt aaa aat agt gat gat ata ata ttt aat gaa tct aaa | 672 |
| Asp Phe Ile Phe Lys Asn Ser Asp Asp Ile Ile Phe Asn Glu Ser Lys | |
| 210 215 220 | |
| tta tat tct atg att aaa caa ttt aat ata aag tta aaa gat ata aga | 720 |
| Leu Tyr Ser Met Ile Lys Gln Phe Asn Ile Lys Leu Lys Asp Ile Arg | |
| 225 230 235 240 | |
| aca ttt gga gtt aat aga gtt tta ata caa gaa ttg tgg aaa aat gtt | 768 |
| Thr Phe Gly Val Asn Arg Val Leu Ile Gln Glu Leu Trp Lys Asn Val | |
| 245 250 255 | |
| aga gat tta gat att atg gat att agg cat aaa gat ata aaa aaa ata | 816 |
| Arg Asp Leu Asp Ile Met Asp Ile Arg His Lys Asp Ile Lys Lys Ile | |
| 260 265 270 | |
| ata tca gaa gta gtt aaa aga aca gct aat ata att ggt cat aca cca | 864 |
| Ile Ser Glu Val Val Lys Arg Thr Ala Asn Ile Ile Gly His Thr Pro | |
| 275 280 285 | |
| act ata tcc aaa aat agt tat ata gta gat gaa ata aga tct ata ata | 912 |
| Thr Ile Ser Lys Asn Ser Tyr Ile Val Asp Glu Ile Arg Ser Ile Ile | |
| 290 295 300 | |
| gat aaa gat act ata aac aaa gct aaa gaa atg aca ttt gat gaa tat | 960 |

Asp Lys Asp Thr Ile Asn Lys Ala Lys Glu Met Thr Phe Asp Glu Tyr
 305 310 315 320

tat aaa tat att gta gat aaa tta aaa gaa tta acc aat taa 1002
 Tyr Lys Tyr Ile Val Asp Lys Leu Lys Glu Leu Thr Asn
 325 330

<210> 71

<211> 1161

<212> DNA

<213> Amsacta moorei entomopoxvirus

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<223>

<400> 71

atg ggt ggt aga gta agt ata tcg ttt ata aga cca gag aat aat aat 48
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 1 5 10 15

aat gga aat aaa aat tta tta ata ggt tta agt gat aat aac ata gtt 96
 Asn Gly Asn Lys Asn Leu Leu Ile Gly Leu Ser Asp Asn Asn Ile Val
 20 25 30

aga gtt ccg atg ttt gaa caa att aat aga ata cca aga tcg gct tat 144
 Arg Val Pro Met Phe Glu Gln Ile Asn Arg Ile Pro Arg Ser Ala Tyr
 35 40 45

gaa aat ctc gac gaa tat gaa ata aat tat tgt att gga act cca ttt 192
 Glu Asn Leu Asp Glu Tyr Glu Ile Asn Tyr Cys Ile Gly Thr Pro Phe
 50 55 60

aat tct ttg gca gaa tgt gca tta tta ttt aat aat aat att ttg tct 240
 Asn Ser Leu Ala Glu Cys Ala Leu Leu Phe Asn Asn Asn Ile Leu Ser
 65 70 75 80

aat tat aca agc gaa tta gat aat tat gta ata act aac gaa gga tcg 288
 Asn Tyr Thr Ser Glu Leu Asp Asn Tyr Val Ile Thr Asn Glu Gly Ser
 85 90 95

ccg tgt act agt tta aca ttt agg ccg gga agt ata tta tat ggt aat 336
 Pro Cys Thr Ser Leu Thr Phe Arg Pro Gly Ser Ile Leu Tyr Gly Asn
 100 105 110

| | |
|---|------|
| tca gaa tgg tta gaa ggt aga aca ttt gtt gga aat aaa tgt aaa ata | 384 |
| Ser Glu Trp Leu Glu Gly Arg Thr Phe Val Gly Asn Lys Cys Lys Ile | |
| 115 120 125 | |
| aga tat aga gga tat cca ata tat gaa aat gat ttg cgg gaa tgt tgt | 432 |
| Arg Tyr Arg Gly Tyr Pro Ile Tyr Glu Asn Asp Leu Arg Glu Cys Cys | |
| 130 135 140 | |
| act ggt aaa aga aca tct ggt tgt cac gaa aca tta ata aat aac ttt | 480 |
| Thr Gly Lys Arg Thr Ser Gly Cys His Glu Thr Leu Ile Asn Asn Phe | |
| 145 150 155 160 | |
| aca aca cca cat tgt aat gta aca atg caa aat ttt tgc aga caa aat | 528 |
| Thr Thr Pro His Cys Asn Val Thr Met Gln Asn Phe Cys Arg Gln Asn | |
| 165 170 175 | |
| ccg gaa gat tta tat tgc tat aga tgg atg tat agc caa tct aaa aca | 576 |
| Pro Glu Asp Leu Tyr Cys Tyr Arg Trp Met Tyr Ser Gln Ser Lys Thr | |
| 180 185 190 | |
| ttt gat att gct tta aaa tta tat tca gaa tta tgt agt ata gat cat | 624 |
| Phe Asp Ile Ala Leu Lys Leu Tyr Ser Glu Leu Cys Ser Ile Asp His | |
| 195 200 205 | |
| act aaa tta tat tgt gat tat atg tgt gtg tat gcg aga gaa aat gga | 672 |
| Thr Lys Leu Tyr Cys Asp Tyr Met Cys Val Tyr Ala Arg Glu Asn Gly | |
| 210 215 220 | |
| tat cca gga tat tgt gat gat tcg ttg tca aac tgg tgt aaa aat aat | 720 |
| Tyr Pro Gly Tyr Cys Asp Asp Ser Leu Ser Asn Trp Cys Lys Asn Asn | |
| 225 230 235 240 | |
| agt aat aat tcg tta tgt ttt tgt tat aat cct cct act gaa ttt ata | 768 |
| Ser Asn Asn Ser Leu Cys Phe Cys Tyr Asn Pro Pro Thr Glu Phe Ile | |
| 245 250 255 | |
| cca gat gtt gaa gaa gtt ttg ggt cca aaa gaa tgt tgg tta gcg cca | 816 |
| Pro Asp Val Glu Glu Val Leu Gly Pro Lys Glu Cys Trp Leu Ala Pro | |
| 260 265 270 | |
| tgt act gtc tct tat agt ggt caa aaa tgg tta aca acc aat cag atg | 864 |
| Cys Thr Val Ser Tyr Ser Gly Gln Lys Trp Leu Thr Thr Asn Gln Met | |
| 275 280 285 | |
| aat ata aaa aaa aat tgt aat ata caa tct tgt att ata acc ata gga | 912 |
| Asn Ile Lys Lys Asn Cys Asn Ile Gln Ser Cys Ile Ile Thr Ile Gly | |
| 290 295 300 | |
| tca ttg tta act aga ggt aat aat aaa att gat tta ata aat aat tgt | 960 |
| Ser Leu Leu Thr Arg Gly Asn Asn Lys Ile Asp Leu Ile Asn Asn Cys | |
| 305 310 315 320 | |
| ata aac aat tta aac gca agc aca gta ata aat tca gaa aat tta tca | 1008 |
| Ile Asn Asn Leu Asn Ala Ser Thr Val Ile Asn Ser Glu Asn Leu Ser | |
| 325 330 335 | |
| aat gtc act gat ata aaa ata aat caa aca tgg gga gta ttt ttc gat | 1056 |

| | |
|---|------|
| Asn Val Thr Asp Ile Lys Ile Asn Gln Thr Trp Gly Val Phe Phe Asp | |
| 340 345 350 | |
| cct gtt ata ttt att tta ata ata ttt ata ttt ata ttg ata ata tta | 1104 |
| Pro Val Ile Phe Ile Leu Ile Ile Phe Ile Phe Ile Leu Ile Ile Leu | |
| 355 360 365 | |
| tat ttt tat aat aaa aaa cca ata tat act att aat ata agt gaa act | 1152 |
| Tyr Phe Tyr Asn Lys Lys Pro Ile Tyr Thr Ile Asn Ile Ser Glu Thr | |
| 370 375 380 | |
| aat tta taa | 1161 |
| Asn Leu | |
| 385 | |
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| <210> 72 | |
| <211> 423 | |
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| <213> Amsacta moorei entomopoxvirus | |
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| <221> exon | |
| <222> (1) .. (423) | |
| <223> | |
| | |
| <400> 72 | |
| atg tta agt aat tat gaa aat gat aat aaa atg ata gaa tat tgt aat | 48 |
| Met Leu Ser Asn Tyr Glu Asn Asp Asn Lys Met Ile Glu Tyr Cys Asn | |
| 1 5 10 15 | |
| aat aat aaa gat gat ata aaa tgt caa tgt tta ata gtg aat gat aat | 96 |
| Asn Asn Lys Asp Asp Ile Lys Cys Gln Cys Leu Ile Val Asn Asp Asn | |
| 20 25 30 | |
| atc gat gta ttt tca aaa tca tca tat gcg cca tat ttt tgt tgg tat | 144 |
| Ile Asp Val Phe Ser Lys Ser Ser Tyr Ala Pro Tyr Phe Cys Trp Tyr | |
| 35 40 45 | |
| tct gcg tgt aga aat aat gaa aac tat att act agt tta ata aaa agt | 192 |
| Ser Ala Cys Arg Asn Asn Glu Asn Tyr Ile Thr Ser Leu Ile Lys Ser | |
| 50 55 60 | |
| gaa caa caa tat tgt aat att aca gtg tgt gaa att agt gtt aca gat | 240 |
| Glu Gln Gln Tyr Cys Asn Ile Thr Val Cys Glu Ile Ser Val Thr Asp | |
| 65 70 75 80 | |

| | |
|---|-----|
| ata gta tta aat gac aat gga aat tta act gta aca aac gaa tgt gct | 288 |
| Ile Val Leu Asn Asp Asn Gly Asn Leu Thr Val Thr Asn Glu Cys Ala | |
| 85 90 95 | |
| | |
| agt aac ata aat cct ata tat tca tta tct caa att ata gtt aat tta | 336 |
| Ser Asn Ile Asn Pro Ile Tyr Ser Leu Ser Gln Ile Ile Val Asn Leu | |
| 100 105 110 | |
| | |
| acg tca ttt gac ata cca aat tta ttt gta agt ttt ttt tat ccg ata | 384 |
| Thr Ser Phe Asp Ile Pro Asn Leu Phe Val Ser Phe Phe Tyr Pro Ile | |
| 115 120 125 | |
| | |
| gtt att att ata tca att tta ata ttt ttt aaa aaa taa | 423 |
| Val Ile Ile Ile Ser Ile Leu Ile Phe Phe Lys Lys | |
| 130 135 140 | |

<210> 73

<211> 747

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1) .. (747)

<223>

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| <400> 73 | |
| atg aat gaa tcg caa tta caa acc aga aat agt agt att aat ata ggt | 48 |
| Met Asn Glu Ser Gln Leu Gln Thr Arg Asn Ser Ser Ile Asn Ile Gly | |
| 1 5 10 15 | |
| | |
| aga act ata ttt aat gac gta tat act aga ttt atc gat aaa tta aat | 96 |
| Arg Thr Ile Phe Asn Asp Val Tyr Thr Arg Phe Ile Asp Lys Leu Asn | |
| 20 25 30 | |
| | |
| aga ata tct agt aca aca aat att aat tgt aat ata aat ata aat gaa | 144 |
| Arg Ile Ser Ser Thr Thr Asn Ile Asn Cys Asn Ile Asn Ile Asn Glu | |
| 35 40 45 | |
| | |
| ata aga aca agt aat att aat aat tgt aat ata gtt tta agt aat aaa | 192 |
| Ile Arg Thr Ser Asn Ile Asn Asn Cys Asn Ile Val Leu Ser Asn Lys | |
| 50 55 60 | |
| | |
| tgt gtt agt aat gaa ata act agt ttt aca tta tta tta caa agt tta | 240 |
| Cys Val Ser Asn Glu Ile Thr Ser Phe Thr Leu Leu Leu Gln Ser Leu | |
| 65 70 75 80 | |

gga gaa act atg tta cta tta cca gaa gac aga cgc aca caa ata gaa 288
 Gly Glu Thr Met Leu Leu Leu Pro Glu Asp Arg Arg Thr Gln Ile Glu
 85 90 95

aat ata tta gga ata tcc aca gat gat ata ata aat gaa aat gat act 336
 Asn Ile Leu Gly Ile Ser Thr Asp Asp Ile Ile Asn Glu Asn Asp Thr
 100 105 110

gga ttc ata aat aat tgt aga gca agt gca gta gtg gac aat agt ata 384
 Gly Phe Ile Asn Asn Cys Arg Ala Ser Ala Val Val Asp Asn Ser Ile
 115 120 125

aat atc ggt act ata gaa ata aat gat tgt tat tct aat ttt cct act 432
 Asn Ile Gly Thr Ile Glu Ile Asn Asp Cys Tyr Ser Asn Phe Pro Thr
 130 135 140

gat ttc tta ttt tta aat gcg ggt tct gcg gat gct aat tgt gga ata 480
 Asp Phe Leu Phe Leu Asn Ala Gly Ser Ala Asp Ala Asn Cys Gly Ile
 145 150 155 160

aaa tat ata tca gat gca tta cta aaa tta gat aat aga aaa cca gaa 528
 Lys Tyr Ile Ser Asp Ala Leu Leu Lys Leu Asp Asn Arg Lys Pro Glu
 165 170 175

tta tca ttg caa tta ttg ttt aat ata aaa atg ata gat tat ata ata 576
 Leu Ser Leu Gln Leu Leu Phe Asn Ile Lys Met Ile Asp Tyr Ile Ile
 180 185 190

ata tta ata act att tta tct ata tat ata tta ttt att ttt atg tca 624
 Ile Leu Ile Thr Ile Leu Ser Ile Tyr Ile Leu Phe Ile Phe Met Ser
 195 200 205

ttt tta ata cca aga aat aaa aaa tct atc tat tat tct aga aat act 672
 Phe Leu Ile Pro Arg Asn Lys Lys Ser Ile Tyr Tyr Ser Arg Asn Thr
 210 215 220

att ctt aat aaa aat gat aaa atc tta gaa aat att tat ttg aga cat 720
 Ile Leu Asn Lys Asn Asp Lys Ile Leu Glu Asn Ile Tyr Leu Arg His
 225 230 235 240

tac gat ggg atc aat aat ttt ata tga 747
 Tyr Asp Gly Ile Asn Asn Phe Ile
 245

<210> 74

<211> 1011

<212> DNA

<213> Amsacta moorei entomopoxvirus

<220>

<221> exon

<222> (1)..(1011)

<223>

<400> 74

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|---|-----|
| atg gga ggc agt gtt gac atc gaa gct aga tat act ggt tcc tct aat | 48 |
| Met Gly Gly Ser Val Asp Ile Glu Ala Arg Tyr Thr Gly Ser Ser Asn | |
| 1 5 10 15 | |
| ttt caa gaa aca tat ttg tca ttt tca aat tta att aat act ata tat | 96 |
| Phe Gln Glu Thr Tyr Leu Ser Phe Ser Asn Leu Ile Asn Thr Ile Tyr | |
| 20 25 30 | |
| ata tta aca aga gat gaa aga ata cca ata ggt ata ttt tca aac aat | 144 |
| Ile Leu Thr Arg Asp Glu Arg Ile Pro Ile Gly Ile Phe Ser Asn Asn | |
| 35 40 45 | |
| cct gat gat tac aga aat tat cga gga tat act gct ata ttt aaa cca | 192 |
| Pro Asp Asp Tyr Arg Asn Tyr Arg Gly Tyr Thr Ala Ile Phe Lys Pro | |
| 50 55 60 | |
| ggc gga tat aaa gaa tta ttg aaa gta aat gac tta gga ccc gat gac | 240 |
| Gly Gly Tyr Lys Glu Leu Lys Val Asn Asp Leu Gly Pro Asp Asp | |
| 65 70 75 80 | |
| ttg tgt tgt att tat gat tgg aga tat gct tgg gtt gat gaa aat aat | 288 |
| Leu Cys Cys Ile Tyr Asp Trp Arg Tyr Ala Trp Val Asp Glu Asn Asn | |
| 85 90 95 | |
| ata tta tca caa aac gca agt gta aat aaa aat tta ttt acg tgc gat | 336 |
| Ile Leu Ser Gln Asn Ala Ser Val Asn Lys Asn Leu Phe Thr Cys Asp | |
| 100 105 110 | |
| cct aga act ata caa gta gga act aat aat att tgt gat aat tcg atg | 384 |
| Pro Arg Thr Ile Gln Val Gly Thr Asn Asn Ile Cys Asp Asn Ser Met | |
| 115 120 125 | |
| tat aga gct tgt ata tta gat ttt aat aat cat aga tat tta gaa gcg | 432 |
| Tyr Arg Ala Cys Ile Leu Asp Phe Asn Asn His Arg Tyr Leu Glu Ala | |
| 130 135 140 | |
| aaa tgt ggt gtt tgg tta gat ggt tta ttt aaa aga ttt gca aca gct | 480 |
| Lys Cys Gly Val Trp Leu Asp Gly Leu Phe Lys Arg Phe Ala Thr Ala | |
| 145 150 155 160 | |
| tca aat att ata aat aat aca aat aat ata cta tta caa tcg tgt tct | 528 |
| Ser Asn Ile Ile Asn Asn Thr Asn Asn Ile Leu Leu Gln Ser Cys Ser | |
| 165 170 175 | |
| aat aat att aat aat gat ttg tgt ata aaa tgg tta ata gca ata aga | 576 |
| Asn Asn Ile Asn Asn Asp Leu Cys Ile Lys Trp Leu Ile Ala Ile Arg | |

| 180 | 185 | 190 | |
|---|-----|-----|------|
| aat agc gga aat cct aca ttt ttt tca tta gca gat aat gtt tta aac | | | 624 |
| Asn Ser Gly Asn Pro Thr Phe Phe Ser Leu Ala Asp Asn Val Leu Asn | | | |
| 195 | 200 | 205 | |
| gca caa aca gat aaa aca aat tta aaa tgt gct ttt tct cct tca tat | | | 672 |
| Ala Gln Thr Asp Lys Thr Asn Leu Lys Cys Ala Phe Ser Pro Ser Tyr | | | |
| 210 | 215 | 220 | |
| att aca gat aca caa aat aga tta aat gtt cca aaa gaa tgt tgg tat | | | 720 |
| Ile Thr Asp Thr Gln Asn Arg Leu Asn Val Pro Lys Glu Cys Trp Tyr | | | |
| 225 | 230 | 235 | 240 |
| aga gag tgt gct ttt tca cca aat tat cta tta tta act gac aat ata | | | 768 |
| Arg Glu Cys Ala Phe Ser Pro Asn Tyr Leu Leu Leu Thr Asp Asn Ile | | | |
| 245 | 250 | 255 | |
| aca tta aaa aat aat tgt tca ttg tct gaa tgt aat ata aat atc gga | | | 816 |
| Thr Leu Lys Asn Asn Cys Ser Leu Ser Glu Cys Asn Ile Asn Ile Gly | | | |
| 260 | 265 | 270 | |
| aat tta gat ata gta tct gcg tca gaa gta aca ata act tgc aat aat | | | 864 |
| Asn Leu Asp Ile Val Ser Ala Ser Glu Val Thr Ile Thr Cys Asn Asn | | | |
| 275 | 280 | 285 | |
| aat aaa tca aat act gta tca tca aga caa aaa tta gat ata tta ttg | | | 912 |
| Asn Lys Ser Asn Thr Val Ser Ser Arg Gln Lys Leu Asp Ile Leu Leu | | | |
| 290 | 295 | 300 | |
| aga gaa tca gaa gat tat aga ttt ttg tta act aac aac att tta ata | | | 960 |
| Arg Glu Ser Glu Asp Tyr Arg Phe Leu Leu Thr Asn Asn Ile Leu Ile | | | |
| 305 | 310 | 315 | 320 |
| tta att tta tta ttt ata ttt tta ata ttt tta ata att aga cat aat | | | 1008 |
| Leu Ile Leu Leu Phe Ile Phe Leu Ile Phe Leu Ile Ile Arg His Asn | | | |
| 325 | 330 | 335 | |
| taa | | | 1011 |

<210> 75

<211> 293

<212> PRT

<213> Artificial Sequence

<220>

<223> HaEPV from Figure 10

<400> 75

Met Ser Phe Asn Pro Ile Ile Tyr Tyr Ile Ser Asp Ile Lys Asn Glu
1 5 10 15

Arg Pro Tyr Lys Lys Asn Thr Lys Pro Tyr Ile Phe Asn Phe Arg Lys
20 25 30

Pro Gly Gln Ile Lys Leu Leu Ile Asn Glu Ile Arg Phe Leu Thr Glu
35 40 45

Asp Val Glu Ile Tyr Lys Asn Tyr Asn Asn Lys Ile Ile Asn Ile Leu
50 55 60

Tyr Ile Gly Ser Gly Lys Gly Tyr His Ile Pro Leu Leu Met Glu Ile
65 70 75 80

Tyr Ser Lys Tyr Asn Ile Ile Trp His Leu Tyr Asp Pro Asn Gly His
85 90 95

Cys Asp Lys Leu Asn Glu Ile Ser Asn Lys Asn Asn Asn Val Asn Ile
100 105 110

Tyr Asn Gln Ile Phe Asp Lys Lys Asp Val Glu Leu Tyr Glu Asp Val
115 120 125

Gln Asn Leu Leu Phe Ile Ser Asp Ile Arg Thr Ile Asp Asp Asp Lys
130 135 140

Ile Glu Pro Asn Thr Lys Asn Leu Ile His Asp Tyr Asp Ile Gln Asn
145 150 155 160

Tyr Val Leu Lys Gln Leu Lys Pro Ile Ala Leu Ile Lys Gln Arg Asp
165 170 175

Pro Phe Pro Asn Asp Trp Asp Glu Ser Tyr Glu Met Tyr Ile Pro Asp
180 185 190

Gly Lys Glu Tyr Val Gln Cys Phe Gln Lys His Asp Ser Ala Glu Tyr
195 200 205

Arg Ile Phe Val Cys Gly Ala Thr Thr Phe Thr Lys Val Asn Leu Asp
210 215 220

Val Leu Lys Thr Arg Asn Ile Asp Lys Lys Leu Ala Trp Tyr Asn Thr

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Ile | Tyr | Met | Lys | Ile | Asn | Asp | Phe | Lys | Lys | Pro | Asn | Val | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ile | Phe | Asp | Asn | Ile | Asn | Asn | Gln | Leu | Lys | Tyr | Lys | Pro | Asn | Asn | Val |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Asn | Lys | His | Pro | Gly | Gln | Leu | Lys | Leu | Leu | Met | Thr | Glu | Leu | Gln |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Phe | Phe | Asn | Asn | Cys | Asn | Ile | Asp | Ala | Leu | Asn | Ser | Lys | Asp | Arg | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ile | Tyr | Val | Leu | Tyr | Ile | Gly | Ser | Gly | Arg | Gly | Tyr | His | Leu | Ile | Lys |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Leu | Leu | Asp | Leu | Tyr | Lys | Asp | Tyr | Asn | Ile | Lys | Trp | Tyr | Phe | Tyr | Asp |
| | | | | 85 | | | | | 90 | | | | | 95 | |

Pro Ser Gly His Cys Ile Ser Leu Glu Arg Met Ser Gln Tyr Val Ser
 100 105 110

Ile Asn Asn Asp Tyr Phe Thr Glu Lys Asn Ile Asn Glu Phe Lys Asn
 115 120 125

Lys Lys Pro Leu Leu Phe Ile Ser Asp Ile Arg Ser Thr Asp Gly Ser
 130 135 140

Glu Pro Arg Thr Lys Asn Leu Ile Asp Asp Tyr Lys Ile Gln Asn Asn
 145 150 155 160

Ile Val Leu Asn Leu Arg Pro Leu Tyr Ser Leu Leu Lys Phe Arg Tyr
 165 170 175

Pro Phe Pro Asp Asp Phe Pro Pro Glu Ile Glu Asn Glu Val Tyr Val
 180 185 190

Asp Gly Ile Lys Phe Leu Gln Pro Phe Cys Gly Pro Gln Ser Thr Glu
 195 200 205

Met Arg Ile Phe Val Ser Glu Gln Asn Ile Ile Leu Lys Asn Phe Ser
 210 215 220

Lys Glu Glu Ser Ile Leu Phe Glu Glu Lys Met Tyr Tyr Tyr Asn Lys
 225 230 235 240

Asn Tyr Arg Ile Ile Asn Lys Asn Asp Ile Leu Ile Ala Gly Phe Ile
 245 250 255

Leu Lys Ser Thr Asn Lys Phe Asp Asn Met Lys Tyr Ile Asp Ile Ile
 260 265 270

Lys Ser Leu Glu Asn Ser Ile Asn Asn Gln Ile Arg Glu Asp Ile Ser
 275 280 285

Phe Asn Lys Leu Asp Ile Lys
 290 295

<210> 77

<211> 333

<212> PRT

<213> Artificial Sequence

<220>

<223> VVJ3R from Figure 10

<400> 77

Met Asp Val Val Ser Leu Asp Lys Pro Phe Met Tyr Phe Glu Glu Ile
 1 5 10 15

Asp Asn Glu Leu Asp Tyr Glu Pro Glu Ser Ala Asn Glu Val Ala Lys
 20 25 30

Lys Leu Pro Tyr Gln Gly Gln Leu Lys Leu Leu Leu Gly Glu Leu Phe
 35 40 45

Phe Leu Ser Lys Leu Gln Arg His Gly Ile Leu Asp Gly Ala Thr Val
 50 55 60

Val Tyr Ile Gly Ser Ala Pro Gly Thr His Ile Arg Tyr Leu Arg Asp
 65 70 75 80

His Phe Tyr Asn Leu Gly Met Ile Ile Lys Trp Met Leu Ile Asp Gly
 85 90 95

Arg His His Asp Pro Ile Leu Asn Gly Leu Arg Asp Val Thr Leu Val
 100 105 110

Thr Arg Phe Val Asp Glu Glu Tyr Leu Arg Ser Ile Lys Lys Gln Leu
 115 120 125

His Pro Ser Lys Ile Ile Leu Ile Ser Asp Val Arg Ser Lys Arg Gly
 130 135 140

Gly Asn Glu Pro Ser Thr Ala Asp Leu Leu Ser Asn Tyr Ala Leu Gln
 145 150 155 160

Asn Val Met Ile Ser Ile Leu Asn Pro Val Ala Ser Ser Leu Lys Trp
 165 170 175

Arg Cys Pro Phe Pro Asp Gln Trp Ile Lys Asp Phe Tyr Ile Pro His
 180 185 190

Gly Asn Lys Met Leu Gln Pro Phe Ala Pro Ser Tyr Ser Ala Glu Met
 195 200 205

Arg Leu Leu Ser Ile Tyr Thr Gly Glu Asn Met Arg Leu Thr Arg Val
 210 215 220

Thr Lys Ser Asp Val Val Asn Tyr Glu Lys Lys Met Tyr Tyr Leu Asn
 225 230 235 240

Lys Ile Val Arg Asn Lys Val Val Val Asn Phe Asp Tyr Pro Asn Gln
 245 250 255

Glu Tyr Asp Tyr Phe His Met Tyr Phe Met Leu Arg Thr Val Tyr Cys
 260 265 270

Asn Lys Thr Phe Pro Thr Thr Lys Ala Lys Val Leu Phe Leu Gln Gln
 275 280 285

Ser Ile Phe Arg Phe Leu Asn Ile Pro Thr Thr Ser Thr Glu Lys Val
 290 295 300

Ser His Glu Pro Ile Gln Arg Lys Ile Ser Ser Lys Asn Ser Met Ser
 305 310 315 320

Lys Asn Arg Asn Ser Lys Arg Ser Val Arg Gly Asn Lys
 325 330

<210> 78

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Consensus from Figure 10

<400> 78

Pro Asn Tyr Leu Phe Tyr Ile Gly Ser His Leu Ile Trp Asp Ile Asp
 1 5 10 15

Leu Tyr Gln Asn Leu Pro Lys Gly Ser Arg Lys Asn Asn Tyr
 20 25 30

<210> 79

<211> 46

<212> PRT

<213> Artificial Sequence

<220> .

<223> Insect Cons from Figure 10

<400> 79

Pro Asn Tyr Leu Phe Asn Leu Tyr Ile Gly Ser Tyr His Leu Tyr Ile
 1 5 10 15

Trp Tyr Asp Cys Phe Leu Ile Asp Leu Tyr Gln Asn Leu Pro Leu Lys
 20 25 30

Gly Ser Arg Lys Tyr Asn Asn Asp Ile Leu Asn Tyr Ile Lys
 35 40 45

<210> 80

<211> 80

<212> PRT

<213> Artificial Sequence

<220>

<223> AmEPV Cons from Figure 10

<400> 80

Pro Tyr Tyr Asp Asn Tyr Asp Asn Asn Lys Lys Leu Ile Phe Leu Asn
 1 5 10 15

Asn Asn Ile Leu Tyr Ile Gly Ser Lys Tyr His Leu Tyr Ile Gln Trp

20

25

30

Tyr Asp Cys Asn Ile Phe Asp Leu Ile Asp Asp Asp Asn Leu Tyr Gln
35 40 45

Asn Ile Leu Pro Ser Leu Lys Asn Trp Ser Gly Tyr Ser Arg Ile Lys
50 55 60

Tyr Asn Asn Asp Ile Ile Leu Asn Lys Asn Tyr Asn Ile Lys Lys Ile
65 70 75 80